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January 17, 2003, 18:15:29 ; Search time 3708.55 Seconds

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ALIGNMENTS

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Antelman, D., Gregory, R.J. and Wills, K.N.
Retinoblastoma tusion polypeptides
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Patent: Be 6.479927-A + 40-APH-2002;
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                                                                                                             25.49 GGAGGGAAGATCTATATTTCACCCCCTGAAGAGTCCATATAAAATTTCAGAGGTCTGCCA 2598
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Tissue specific expression of retinoblastoma protein
Fatent: JP 2001503638-A 2 21-MAR-2001;
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LenA	LeuAsukeukysAlaPheAspPheTyrkysValIleGluSerPheTleLysAlaGluGly 4	163

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                                464 AsntouthrateGluMet.HetysHistouGluArg/ysGluHisArg11eMet.GluSer
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                             104 IleSerThrGluffeAsnSerAlaLeuValLeuLysVälSerTrpffeThrPheLeuLou 123
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Bookstein,R. and iee,E.Y.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Homo sapiens retinoblastoma cDNA to mRNA.
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Detection of heterozygous metations in the RH1 gene in
retinoblastoma patients using single-strand conformation
pel, metaliasm stalls. Single polymetalse unaid reaction sequencing
Oncogene 7 (7), 1445-1451 (1992)
                                           Krafekr, K.A., Offerson, G.A., Bogg, A., Coxon, A.B., Geradfs.J.,
Cowell, J.K. and Kayo, F.J.
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                                                                                                                                                                      DRES AGASTABARATO TOATAACO ASSOCIASTOTGACITACITTGCCTTCTTTGTAGGATAT 2948
                                                                                                                                                                                              1093 AAABTUTGGGGAATAVBASTIGTGTGTGAAATGGATGACAGGGATACAAACTTGGAGTTGGC 1187
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA Library Preparation, Life Technologies, Inc. CDNA Library Arrayed by. The L.M.A.G.E. Consortium (LLNL.) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution; Inc. Consortium/LLNL at:
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Contact. Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: ATCC
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Contact: Fobort Strausberg, Ph.D. Email: eqapbs remail.nih.gov

Unpublished (1999)

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/note-"Ordan: testis: Vector: pGMV SPORTS; Site 1: Noil: Site_1: Sall; Cloued unidirectionally; oliqo dr primed. Average insert size 2.5 kb. Library emiched for full-length clones and constructed by Life Technologies. Noie: this is a NHIMGC Library."
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               chnA Library Preparation: Lite Technologies, Inc. chnA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation
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/tissue_lype-"embryonal carcinoma, cell line"
/lab_host-"DH10B (phage·resistant)"
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Site_2: Sali; cloned unidirectionally; oligo-dT primed.
Average insert rize 2 % kb !!brary earlebed for full-length clones and constructed by Life Technologies
Note: this is a NHH_MGC Library."
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Eukaryota: Motarca: Chordata: Craniata: Vertebrata: Eufeleostemi,
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
TEM GATALACTGTGTGTGTTTTTTTATAAATTTTGTTTTTAATTAAAAGGTGGAAGGAA 3228
                                                                                                                                                                                      3229 AGIATAACCATATGATACIATACIACTGAAACAGATTTCATACCTCAGAATGTAAAA 3288
                                                                                                                                                                                                                                                                            4289 GAACTIACTGATTATTTTCTTCATCCAACTTATGTTTTTAAATGA-GGATTATTGATAGT 3347
                          CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by The L.M.A.G.E. Consortiom (LLNL) DNA Sequencing by. Agencount Bioscience Corporation Clone distribution. MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                      1 (bases 1 to 881)
NIH-MGC http://mqc.nci.nih.qov/.
National Institutes of Health, Manmalian Gene Collection (MGC)
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High quality sequence stop 690
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: egapbs-ramail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"/db aref="taxid 3606"
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AMENOMORIT_6505183 NIH_MGC_125 Homo sapiens obun clone iMAUE:5508245
5', mkwa seguence.
HM545881
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1122)
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599 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATG 558
                                                                                                                                                                659 AGGIGAAAAAIGITIAITICAAAAAITITAIACCITITAIGAAITCTCTIGGACTIGTAA 718
                                                                                                                                                                                                                                                                                    541 TGATTTTAAATTCACCAAGTGATGAAGCIICAGAAAAICIGATTTCCTATTTTAACAACT 600
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                                                                                                                                                                                                               241 AGGIGAAAATGTTTATTICAAAATTTTATACCITTTATGAATTGICTTGGAGIIGIAA 300
                                                                                                                                                                                                                                                            719 CATCIAALGGACIICCAĞAGGIIGAAAAICIIICIAAACGATACGAAGAAAIITATCIIA 778
                                                                                                                                                                                                                                                                                                                                                                                                      361 AAAATAAAGAIGTAGAATAGTAATITITIGGATGATAAAAAGTGTTGAGAGTGATT 420
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National Institutes of Health, Mammalian Gene Collection (MGT)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                       779 AAAATAAAGATCTAGATGCAAGATTATTTTGGATCATGATAAAACTGTTGAGAGTGALL
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Tissue Procurement: Invitrogen
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Anote-"organ: ovary (pool of 3); Vertor: pCMV-SPORI6;
Site 1: ForeNV (destroyed): Site_2: Not!; RNA source pool
of three ovaries, from forest ranging in age from 38 to
47 yo. Library is oliqo-dI primed and directionally cloned
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking east 036.
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size 2.1 kb, insert size range 1-3.5 kb. Library is
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DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
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/lab_host-"pH10B"
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High quality sequence stop: 773.
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EST 14 AUG-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Chanjata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 727)
Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: poustkarmpimd-berlin-dahlem.mpq.de
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DREZ): Email s.wiemann4dkfr-heidelberg.de;
sequenced by DREZ (German Cancer Research Center,
Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Vector: pTriplEx2; Site_1: StitA; Site 2: StitB; cDNA-collection"
                                                                                                                                                                       2974 TAATITATA - TOTATATITITITAATITAAGAA CACCCITAGAAAALGIGIGGIA 3030
                                                                                      3031 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACCAAAATTATCCTGAACTCTTC +090
                                                                                                               No sl sequence available.
This clone (DKFZpA1908H6) is available at the RZFD in Berlin.
Please contact the KZPD. Ressourcerorutum, Heubnerweg 6, 14059
Herlin-Charlottenburg, GERMANY; Email: clonestypd.de.
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threstrasse 73, 14195 Herlin, Germany
Trel: 49-30-841311623
Fax: 49-30-84131128
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/clone-"NKFZp3130816"
/clone-"Ib-"313 (synonym: htec2)"
/dev_stago-"admit"
/lab_host-"ph108"
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Department Lehrach
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HG51966: BST 18-APR-2001 602611848E: NHLMGC_60 Homo sapiens cONA clone IMAGE-4737634 51, mKNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1285 AAATACACTTTGTGAACGCCTTCTGTCTGAGCACCCAGAATTAGAACATAGATGATCTTGTGT 1844
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                                                                                                                                                                     845 GOTTITOGAGGACACCCTGCAGAATGAGABATGAAGTGAGAGAGAGAGAGAGAGAGATTTGGAGGA
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                                                                                       61 AAATACAGITTGTGAAGGOOTTOLGTGAGOAGGAAATTAGAAATTAGAAATATOATOATOA
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                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
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                                                                                                                                                                                                                                                                                                                                                                   Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
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Location/Qualifiers
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enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pCMVSPORT 6
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8-71 Email : Hiangwhiteleck.com UKL :
http://tulllength.invitrogen.com 26.uthers
18-8 : 17-9 255 t. 26.uthers
6.95 AGANCATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTTATACCTTT 695
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                                       661 ALTITAGAGGAL TAGALTGAATTAGTATTGGAATCTGATATACTGTGTTG--TTGA 717
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Email: segret genoscope.cus.fr, Web : www.genoscope.cns.fr.
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Hest Local Similarity 93.6%; Pred. No. 4.9e-126;
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/lab.bost "bH108"
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                 816 TGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACAGAGAAAAAAA 875
                                                                                                                                                                                                   876 AAGTAAFFTTGATGAAGAGGTGAATGTAATTCFTGFAAGAFTGFAATTAGGAAFTGTAT 935
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                                                                       756 ACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGATCA 815
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1234 GACAA-CATITITICATATGICITITATIGGCGTGCTGGCGTTGTAAT 1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact. Robert Strausberg, Ph.D.
Email: cqapbs-r@mail.nih.gov
Tissue Procurement: CLONTECH Laboratories, Inc.
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High quality sequence stop: 726.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24.15 FACACELTEGGAPEGAPEGPPPPCAGAGAPGPGAGEGPAPAAGPPFCCCAGGFFCPFFF 2674
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4; Caps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20.78, Score 692.2, DB 12, Langth 767, 97.18; Pred. No. 7.3e-125;
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3-4 Febs TNA None IMAGE:5576:39
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                                                                                                                                                                                                                                           Eakaryola, Metazoa: Chordata, Chaniata: Vertebrata, Enteleostomi: Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo. | (base) to 972) | NIH MGC Entp.//mgc.ncl.nih.gov.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution. MCC clone distribution information can be
found through the I.M.A.G.E. Consortium/LANL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GATAGCATICGATACCTICAAACAAGAAGAAATGAGGATCTEAGGACTITEGLIGGAGAC 120
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/tissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phage resistant)"
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Plate: LLAM12329 row: | column: 12
High quality sequence stop: 621.
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8M466194
ARENA PRI_F4F6373 NIB_MRY_32 HRd
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13 ACGATGTGAACATCGAATCATGGAATCCCTTGCATCTCTCAGATTCACTTTAFTTCA 72

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EST 05-FEB-2002
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AGENFOURT_640274! NH_MGC_72 Homo sapiens cDNA clone IMAGE:5528814
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Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
2911 AGGCTGTCTGACTACTITGCTTTGTAGGAIAIAGGGAIGITTGCTCTTT 2970
                                                                                                                                                                                                                                                                                      8091 TGCAAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTAGAAAATTTA 3150
                                                                                                2971 IATIAATITATATGTATATITITITAATITAAGATGAGACGTTAGAAAATGTGTGGTA 3030
                                                                                                                                                                                           3031 FCTATCH GCAATGCAATHGATTGACTGCCATTGACGAAAATTAFGCTGAACTCFFC 3090
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                         541 TOTATOTHOCAANGCAANIGALIGACIGGCCATICACAAAATTAGGGGAAGGTCTC 600
                                                                                                                                                                                                                                                                                                                      661 ATTITACTACTOGAATCTGAIAIACTGTGGGGCTTGCTTTTATAACAATTTTGCCTTTA 720
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NIH-MGC http://wer nel rib per/
National Institutes of Health, Mammalian Gene Collection (MGC)
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Clond distribution: McC clone distribution information can be
found through the L.M.A.G.E. Consortium/LINL at:
http://image.llh.acov
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/tissuc_type="melanotic melanoma"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
Email: eqapberramail mih gev
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1452 ACGATGTCAACATGGAATCATGGAATCCCITGGGTGTCGCAGATGGACTTATTGA 1511

0; Mismatches

Conservative

Best Local Similarity

Matches 678;

0; Indels 0; Gaps

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BM475503
AGENCOOKT_6480007 NTH_MGT_92 HOMO SAPIETIS CDNA CLODE IMAGE:5575683
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
UNA Sequencing by. Agenciant bloss (ence Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
                  193 ATCTCCAAAGAAAAAAGGTCAACTACGCGTGTAAATGCTACTGCAAATGCTAGAGACAA 252
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1 (bases 1 to 1001)
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Tissue Procurement: ATCC
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Accrage insort size 2.5 kt. Library enriched for
full-length clones and constructed by Life Technologies
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High quality sequence stop: 734.
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BIN6R459 672 NP mRNA libear EST 11-07T-2001 ACT 42343EF NFLWEY_90 Homo sapiers DRNA clone !MACE:5102422 57,
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Bikalyota, Metaboa, Cherdata, Cianiala, Vertebrata, Euteleostomi;
Mammalia, Eutherla, Primates, Catarrhini, Hominidae, Homo.
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//ibsuc_type="ademocationma, cell line"
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//note="organ="iyer: Vector="ppa="skipk" [stc_1: Not];
site_1: Sall: Cloned unidirectionally; oliqo-dr primed.
Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Life Technologies
Note: this is a NIH_MSC_library.
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Cleme distribution, MCC % inc. distribution information can be found through the LLM.A.G.E. Consortium/LLML at:
http://mage.llm.agov
Plate: LLMM12026 row. k. column: 67
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/organism-"Homo sapiens"
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Contact: Robert Strausberg, Ph.D.
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/clone_lih="NIH_MGC_90"
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NIH-MGC http://mgc nci nih gov/.
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Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
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RESULT 13
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BOLLILL? 886.045 NIH_MGC_92 Homo sapiens CDNA clone IMAGE:6041563
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Enkaryota: Metazea; Cherdata: Graniuta; Verfebrata; Entelcostomi;
2573 AGGAAGAAA EGAGATIT GAGAAACHTGATT 2632
                                                                                             2633 GICTOTOMINGATOTOMINATIATANOTITOCONOGIICIGITITATOGOCONOAITIAAIAI 2692
                                                                                                                                                                                                                                                                                            2753 CACLIGAAATGITAGICATIGITAITTAIACAAGAITGAA-AATCITGIGTAAATCCTGC 2811
                                                                                                                                                                                                                                                                                                                                                                                            2812 CATTIAAAAAGTIGTAGGAGAITGITTGCTCTTGGAAAGIAAAATTGCTGGCTTTATGG 2871
                                                                                                                                                                                               2693 CTTCARCICITITIGGGGGAIAIAAAAIGIGGAGAIGGGAAITGTTTGGGAIGGTGAIGGTAAGG 2752
                         481 CTTCAGCTCTTTTTGTGGAIAIAAAAIGIGCAGAIGCAAITGTTGGGIGAITCCIAAGC 540
                                                                                                                                                                                                                                                                                                                                           541 CACTEGAAATGITAGTCATTGITATTATACAAGATTGAACAATCITGTGAAATCCIGC 600
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NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Bealth, Mammalian Gene Collection (MGC)
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                                                                                                                                                                                                                         19.3%; Score 646.6; DB 14: Length 880; 98.5%; Pred; No. 5.7e-116; 1ive 0: Mismatches 9; Indels 1;
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/tissue_type="embrychal carcinoma, cell libe"
/lab_host="DHIOB (phaye-resistant)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D. Email: egapbs remail.nih.gov
Lissue Procurement: AICS
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Location/Qualitiers
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Mammalla, Butheria, Primates, Cataribini, Homindae, Homo.
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601063567F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:4449873 5′,
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NiH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                               582 ACGGATAGCAAAACAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAAGA 641
                                                                                                                                                                                                                                                                                                                                       315 ACCCATACCAAAACAACTACAAAATGATACAAAAATTATTCAAAGTTCTCTGTAAAAAAA 374
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Clone distribution: MGC clone distribution information can be
found through the 1.M.A.G.E. Consort:um/LLNL at:
462 TGTCCTTGACTATTTTALTAAACTCTCACCTTCCTTGCTCAAAGAACTALALAAAAG 521
                                                                                                                                                                                                                       522 AGCTGTTATACCCATTAATGGTTCACCTCGAACACCAGGGGAGGTCAAAAAAAGGGG
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Tissue Procurement: ATCC
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Bomo sapiens Eukaryota; Metazoa; Chordata; Cranlata; Vertrebrata; Euteleoistomu; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1051) NIH-MWC http://mec.nci.nih.qov/. National Institutes of Health, Mammalian Gene Collection (MGC) human. ORGANISM AUTHORS TITLE REFERENCE KEYWORDS SOURCE

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DEFINITION
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Carninei, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Troh, M., Konco H., Okasaki, V., Wiramaisu, M. and Hayishisaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare [0]]? Lendth cDNA libraries for rapid discovery of new access Genome Pes. 10 (10), 1617-1630 (2000)
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                                                                                   Kawai, J., Shinadawa, A., Shibata, K., Yoshino, M., Hoh, M., Ishii, Y., Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S., Jawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I., Saito, L., okizaki, Y., Goptori, I., Bono, H., Kasukawa, L., Saito, R., Kadola, K., Matsuda, H., Ashburnor, M., Hatalov, S., Casavant, T., Fielschmann, W., Gausterland, L., Gissi, C., King, H., Kochiwa, H., Kuchi, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G., Guackenbush, T., Schimh, L.M., Staubli, F., Suzuki, E., Tomita, M., Maquer, L., Washio, I., Sakai, K., okido, T., Futuno, M., Aono, H., Haidorelli, R., Harsh, G., Makeo, J., Hoffelli, D., Pojunga, N., Haidorelli, K., Harsh, G., Makeo, J., Hoffelli, D., Pojunga, N.,
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Hayashizaki,Y.
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57, mPNA sequence.
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242 AspHisAspIySTErLeuClnThrAspSerlleAspSerPhcCluThrClaAryThrPre 261
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                                                      222 SerLysAraTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeu 241
                                                                                                                                                                                                            26.2 ArguysserAsnicaAspCluClaValAsnValileProProHisThrProValArgThr 281
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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    (bases 1 to 727)
    Poustka,A., Wellenreuther,E., Mewes,H.W., Weil,B. and Wiemann,S.).

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Mammalia: Eutheria: Primates: Cataribini: Hominidae: Homo.
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Heidelberg/Germany) within the CDNA sequencing consortium of the
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Please contact the EZFO: Ressourcenzentium, Heubnerwey 6, 14059
Berlin-Charlottenburg, GEKMANY; Email: clone@izpd.de.
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This is the 8. Sequence of the clone insert
Clone from 8. Witemand. Molecular Genome Analysis, Serman Cancer
Research Center (DKFZ): Email 8.Wiemann adktz heidelberg.de:
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Fax: +49-30-84131128
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Fax: 314 286 1810
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//note-inclaim skin.Vector prWV SporTK: Site_1: NotI:
Site_2: Sall, Cloud unidirectionally. Primer: 015go dr
Average insert size 2 kt. (ibrary constructed by Life
                                                                                                                  Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Eutheria: Primates, Catarrhini, Hominidae, Homo
                                                                                                                                                                                                                                                                                                            CDNA Library Arrayed by: The LLM.A.G.B. Consortium (LLNL)
DNA Sequencing by: Agencoult Bioscience Curporation
Clone distribution: MGC clone distribution information can be
tound through the LLM.A.G.B. Consortium/LLNL at:
http://image.llm.agov
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                                                                                                                                                                                                                                                                                               sife Technologies, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type-"melanotic melanoma"
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                                                                                                                                                                                                                                                          Email: cqapbs r@mail.nih.qov
Fissue Procurement: ATCC/DCTD/DTP
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                                                                                                                                                                                                                                       Contact: Robert Strausberg, Ph.D.
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NIH-Moo bitp://mgo.nci.nih.gov/
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/note="Vector. pi7130-Pac (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary gland tissee from a lactar ng formate, and was then primed with a Not I - OllacdT) primer. Double-stranded cDNA was liquid to Bro RI adactors (Pharmacia), digeored with Not I and cloned into the Not I and Bro RI sites of the Modified pT713 vector. Library is normalized. Library was constructed by Bento Soarcs and M. Patima Honardo. "
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Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Putheria; Rodentia, Sciurognathi, Muridae; Murinae; Mus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      914 bp mENA linear ESI 27 JAN-1 VW548014 rl Soaros_mammary_gland_NMLMG Mus musculus cDNA clone IMAGE:1247598 5 similar to qb:M15400 RETINOBLASTOMA-ASSUCIATED PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility protein (MOHSE), mPNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available \log_{\rm palty} tree through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
797-61, Niusert, ashestanta, LeualastumetThrserThrargIhrarametsin 816
                                                                                                         757 CysAsnSerAspargVall.cuLysArgSerAlaCluClySerAsnProPrelysProLeu 776
                                                                                                                                                                            422 DSTANTANTANTSTRATESAAAASANTATEAAGGAAGGAACCTCCTAAACCACTG 481
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone_lib="Soares_mammary_gland_NMLMG"
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Seq primer: 28ml3 rev2 BT from Amersham
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/tissuc_type:"mammary qland"
/lab_host="DH10B"
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Contact. Marra M.Mouse ESI Froject
WashU-HHMI Mouse ESI Project
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by Lite Technologies. Contact.: Peng Lidna Lite
Technologies, a division on Invitroen 9800 Medical Center
Drive Bockville, Maryland 20850, USA Fax : (1) 801 610
8371 Email : Fliangalitetech.com URL :
http://fullength.invitrogen.com.
                                                                               AL563757 LTL_NFLGOT_NBC4 Homo Sapiders con escapion/YAO5 4
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BP 191-91006 EVRY cedex France
Email: segtefagenoscope.chs.fr, Web : www.genoseque.chs.fr
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1 (bases 1 to 792)
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/lab_host="billob"
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/clone_11b="1.11_NFL001_NB04"
/sex="male"
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sequenced by BMFZ (Blomedical Research Center at the Charite,
Herlin/Aermany) within the CDNA sequencing consortium of the German
Genome Project.
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Mammalia: Pithoria; Drimatok; Catarrhini, Hominidae; Homo
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Please contact the FZPD Bessourcentrum, Henhustwey 6, 14059
Berlin-Charlottenburg, GFPMANY: Email: Plone*rzpd de
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Clone from S. Wiemann, Molecular Geneme Analysis, German Cancer
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244 Asplys Principlishraspenii inaspenii bhothathrolnarythribroang 178-263
                              264 SerAsnLeuAspGluGluValAsnValIleProProHisThrProValArgThrValMet 283
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/dov_stage="ado!t"
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Goldman, G.H., Greatho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deolizerra, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.K., Reis, L.F., de Souza, S.J. and
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Eax: +55 IL 2707001
Harl: estupsorthodwiq.orq.br
This sequence was derived from the PAPESDZLICK Human Cancer Genemo
Project. This entry can be seen in the following URL
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Barvard University, Howard Hoques Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
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DNA sequencing by: Washington University Genome Sequencing Center
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Viote—Vector, 17773D Far (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from manmary dand tissue from a lactating female, and was then primed with a Not i - Oliyo(dT) primer; Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not and cloned into the Not i and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Benio Soares and M. Fatima Bonaldo. "a
                                                                                                                                                                                                                                                                                                                                                                                 This close is available regalty free through HAML, y contact the IMAGE Consortium (info@image.llnl.gov) for further information.
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Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, R. and
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/tissuc_type="mammary gland"
/lab_bost="DH10H"
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4444 Forest Park Farkway, Box 8501, St. Louis,
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National Institutes of Health, Mammalian Gene Collection (MGC)
                                         cDNA Library Preparation: Lite Technologies, Inc. clnA Library Arrayad My: The L.M.A.G.E. Consertium (LLNL) INNA Sequencing by: Incyte Genomics, Inc. clone distribution: MGN clone distribution information can be
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Fost processing: Minimum Match 0% Maximum Match 100%

Listing first 45 summarros

om_estinn:* em_estro:* em_htc:* qb_estl:* om_eston:* em_esthum:* em_estov:* em estba:• em_estin:* qb_est4:* qb_est 5:* qb_est 2:* ath_est 4;* em_estmu:* at hte:* db_dss: EST: * fortabase :

Pred. No. is the number of results predicted by chance to have a score areafer than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. *:boi_ssp_mo

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		Description		BM450031 AGENCOURT	BMS61083 AGENCOURT	BO4 89221 ACHNOOURT	BCDD0275 ACENCOURT	BM475603 AGENCOURT	BM545881 AGENCOURT
SUMMARIES		III		1023 13 BM450031	4 HM561084	1 HQ439221	1 HQ220275	8 BM475603	4 BM545881
		guery Match bength OB		1024 1	1071 1	1081 14	881	1001	11.42 1.
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FEATURES

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ALIGNMENTS

EST 05 FEB: 2002 HM450031 1023 bp mkNA linear EST 05 FEB-2002 AGENCOURT_6393544 NIH_MGC_72 Homo Sapiens cDNA clone IMAGE:5528037 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 1023) National Institutes of Health, Mammalian Gene follection (MGF) National Institutes of Health, Mammalian Gene follection (MGF) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: eqaphs-remail.nih.gov
Tissue Procurement: AFC/DFUP/D/IP
CONA Library Preparation: Life technologies, the,
CONA Sequencing by: Agencourt Hoseicher (Vipporation
Clone distribution: MGC clone distribution intormation can be
Cound through the L.M.A.G.E. Consortium/LLN, at: http://image.llnl.gov Flate. LAMM2284 Fow. d volumn. 22 High quality sequence stop: 643. Localion/Qualifiers HM450031.1 GI:18499071 5', mRNA sequence. BM450031 Hómo sapiens human. DEFINITION ORGANISM TITLE JOURNAL ACCESSION REFERENCE AUTHORS RESULT 1 BM450031 LOCUS KEYWORDS VERSION COMMENT

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                                                                                                              Site_2: Sall; Cloned unidirectionally. Primer: Oligo dr. Average insert size 2 kb (ibrary constructed by Life.
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Pred. No. 3 4e 165;
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                                                      /clone_lib-"N!H_MGC_72"
/tissue_type-"melanotic melanoma"
/lab_host-"DHIOB (phage-resistant)"
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^rqapism-"Homo sapi⊖ns"
                                    /ctone-"IMAGE:5528037"
                  /db_xre1-"taxon:9606"
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95.2%;
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1051 kp mRNA linear EST 10 FED 2002
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens chwa clone iMAGE,5550905
5', mRNA sequence.
HM561083
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Site_2: Salt, Gloned unidirectionally. Primer: oligo dI.
Average insert size 1.75 kb. Library constructed by Lite
Technologies."
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Mammalia; Eutheria; Primates, Catarrhini; Hominidae: Homo.
2539 CTTATTATACAGGATSAAAATGTTGTGAAATGCTGCATTAAAAAGST STAGGAA 2598
                                                                                                                                                                                              2599 TIGTTT-CCICTTCCAAAGTAAATTGCIGGGTTTATGGALACTAAGAATGG---CCCL 2654
                        901 TGTTTCCTCTFCTCCAAGTAAAATGCTGTGCCTTATTGGATAGAAGAAATGGCGCCTA, 960
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NIH MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MSC)
Unpublished (1999)
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/lab_host="08108 (phage resistant)"
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Plate: LLAM12263 row: m column: 18
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/db_xref "taxon:9606"
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Tissue Procurement: ATCC
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1219 CGATGTGAACATCGAAFCATGGAATGCGTTGCATGGCTCTCAGATTCACGTTTAGTTGAT 1278
                                                            1039 GAGGITGTAATGGGCAGAIATAGCAGAAGTAGATCTCAGAATCTTGATTGTGGAACAGAT 1098
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121 AATHILAGAAAYTEZIGAALGAGAAAHTILGALAIGIGITELAHGGGGIGGGIGGGTGTT 180
                                                                                          241 TIGESTIFCCCATGGATTCTGAAIGTGCTTAATTIAAAAGCCTTTGAITTITACAAAGTG 300
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BQ4 9221
AGEN0948T_7766562 NIH_MGC_92 Homo sapiens CDNA clone IMAGE:6015480
                                                                                                                                                                                                   Eukaryo'a; Motazoa; Chordata; Craniata; Verfebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                     Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
                                                                                                                                                                                                                                                                                                                                                               Email: eqapbs ramail.mih.gov
                                                                                                             HQ439221.1 G1:21178297
                                                                                                                                                                                                                                                 (bases 1 to 1081)
                                                                                                                                                                                                                                                                                                                   Unpublished (1999)
                                                                 5', mRNA sequence.
BQ439221
                                                                                                                                                                                   Homo sapiens
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                                            DEFINITION
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Another Fordam: restis: Vector: pGMV-SP-REF: Site 1: Nort: Site_2: Sail; Cloned uniditectionally; origo d) primed. Average insert size 2.5 kb. Library enriched for full length clones and constructed by Life Technologies. Note: this is a NHH-MGP Library."
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            CDNA Library Preparation; Lite Technologies, Inc.
CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
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/tissue_type-"embryonal carcinoma, cell line"
/lab_host-"DH10B (phage.resistani)"
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Pred, No. 9.4e-155;
0; Mismatches 5;
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                                                                                                                                                          High quality sequence stop: 732.
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fissue Procurement: AICC
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99.18;
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AGENYOTRI_7572621 NIH_MGC_92 HOMO SAPIOSS SDNA CIONE IMAGE:6644522
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/lab_host="DBIOB (phage-resistant)"
/note="corgan: lestis, Verfor: pww-spoRT6; Site_1: NotI;
Site_2: Sali, Cloned unidirectionally, oligo-dT primed.
Average isset site 2 % kt library entiring for full-length clones and constructed by life Technologies
Note: this is a NH_MGC Library."
a 149 c 155 q 264 t.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                       1985 SAACTHASTGALFATFTGTTCATCAACTTATGTTTTAAATGA-GGAFFAFFGATAGT 3113
2995 AGTATAACCATATGATACTATGATACTGAAAAAAAHTGATGAGAAIGTAAAA 3054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by, The LLM.S.E. Consortium (LLNL.) DNA Sequencing by: Agenceut Bioscience Corporation Cloud distribution. M3C clone distribution information can be http://msacolled.lm.N.G.E. Consortium/LLNL al:
                                     661 IAGAAATTAG-AAAAAATTACTAATTTTACACATTAGATTTTAATTTTACTATTGGAATCT 719
                                                                                               279 AGTATAACCATATGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAA 838
                                                                                                                                                                                                                                                          185 AAAIGGAAGAIGAICTGGIGATITCATITCAGITAATGCIATGTGTCTTGACIAITTTA 244
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                    DB 14; Length 881;
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Pred. No. 1.3c=152;
Or Mismatches 7.
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High quality sequence stop: 690.
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Contact: Robert Strausberg, Fh.D.
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Zelodo lib "NIH MGC 92"
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NIH-MGC http://mgc.nci.nih.gov/.
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Tissue Procurement: ATCC
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AGENCOUPT_6480007 NIH_MOC_92 Home sapiens conA clone LAACH:5575683
57, mkN sequence.
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Mammalia: Eutheria: Primates; Catarrhini: Hominidae; Homo.
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241 AGGTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTCTTGAACTTGTAA 60
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                                                                                      545 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACTCTTCAGACTGATT 6U4
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: ATCC
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//tissuc_fype="combryonal carcinoma, cell line"
//tissuc_fype="combryonal carcinoma, cell line"
//lab_locat="DillOB phage=resistant"
//iothe="corquit testis; Vertor: pCMV SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally, oliqo-dT primed.
Average insert sire 2 = k to library correled for
full-rength clones and constructed by Life Technologies
Note: this is a NIH_MGC Library."
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                                                                               tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
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/db_xret:"taxon:9606"
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High quality sequence stop: 734.
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of three ovaries, from lemales ranging in age from 48 to 49 yo. Library is objaced prime and directionally cloned (becok site is destroyed upon cloning). Average insert site 2.1 kb, insert site range 1-4.5 kb. Hirrary is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 036.
                                                                                                                                                                                                                                                                                                                                                                                                                                         HMS45881
AGENÜÜÜÜRILESÜSTBA NIHLMOLLISE HOMIQ SAPIEUS CINA CLOIGE IMAGESSSBB245
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Site_1: EroRV (destroyed); Site_2: Not1; RNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) UNA Sequencing by: Agencourt Hisoscience Corporation (Clone distribution: MGC clone distribution information can be found through the LLM.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84 TIGGACACTICAANTCCAAAAGAAACTATACTIGAAAAGAGTIGAAGGATATAGGATACATCTTT 843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH.MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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726 GATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTGATTT--CCTATTTTAACAAC 783
                                                                                                     797 GATTTTAAATTCAGCAAGTGATCAACCTTCAAAAAATCCGATTTTCCLATITTLAACAAC B56
                                                                                                                                                                                                     857 IGCACCCI GGAAICCCAAAAGAAAGCITATACCCGGAAAAGAAAGCGTAAGGAATATAGGAAT 916
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1 (bases 1 to 1122)
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95.6%; Pred. No. 8.2e-135;
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Plate: LLAM12359 row: a column: 14
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/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
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/db_xref-"taxon:9606"
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High quality sequence stop: 773.
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Tissue Procurement: Invitrogen
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Heidelberg/Germany) within the cDNA sequencing consortium of the
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/hote "Voctor, pTriplEx2, Situ_1, Sfila, Site 2: StilB;
cDNA-collection"
                                                                        Fax: +49-30-84131128
Email: poustkarmpimq-berlin-dablem.mpq.de
This is the 5' sequence of the clone insert
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Ecsearch Center (HKF2), FmAil S.Wiemann'adKf2- heldelberg.do:
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Max-Planck-Institute for Molecular Genetics
Thnestrasse 73, 14195 Herlin, Germany
Tel: 449-30-84131623
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/clone-lib-313 (synonym: hlec2)"
/dev_stage-"adult"
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Pred. No. 1.1e-128;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D. Email: eqaples tamail.nih.gov
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NIH MGC http://mqc.nci.nih.qov/
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055611848BF1 N1H_MGC_50 Homo sapicus cone cone (MAGE:4737634 5.,
MRNA sequence.
BG610661
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Eukaryota; Metazoa; Chordata; Cranlata: Vertebrata; Euroleostomn;
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                                                                                                                                                                                                                                                                                                                                                                 454_ATACCTTTTATGAATTCTCTTGGACTTGTAACATCTAATGGACTTCCAGAGGTTGAAAAT_51+
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181 CAGTFAATGCFATGTGTCTTGACFATTTAAAACTCTCACGTCATGTTGTTCAAA 240
                                                   274 GAACCATATAAAACAGCIGTIATACCCATTAATGGTTCACCTC3AACACCACAGGT 333
                                                                                                                                                        3.34 CAGAACAGGAGGGAFGGGAFAGGAAAACAAGTTAGAAAATGATAGAAGATTALFGAAGTT 39.3
                                                                                                    241 GAACCATATAAAACAGCTGTTATACCCAIIAAIGGIICAGCIGGAACACCCAGGGGT
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                                                                              /tissue type="adenocareinoma"
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Contact: Robert Strausberg, Ph.D.
Emall: eqapbs-remail.nih.gov
Tissue Procurement: DATD/DTP
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/db_xrel-"laxon:9606"
/clone-"IMAGE:4737634"
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              /note "Objain prostate, Vector: pDNR-LIB (Clonfesh);
Site_1: Sill (qqcqqccqqqc); Site_2: Sill (qqccattatqqcc);
Double-stranded cDNA was prepared from cell line RNA.
5' and 3' adaptors were used in cloning as follows: 5'
                                                                           adaptor sequence: 5'-CACGGCATTATGGCC-3' and 3' adaptor sequence: 5'-ATTCTACAGGCATTATGGCC-3' and 3' adaptor sequence: 5'-ATTCTACAGGCTATATGGCC-3' and 3' adaptor ansert size 15' b (range 0-4.0 b) 14/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech
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                                                                                                                                                                                  Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
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by Life Technologies. Contact: Fend Liang Life Technologies, a division of Invitrogen 9800 Medical Center Prive Rockville, Maryland 20850, USA Fax. (1) 301 610 8371 Email: fliang@diffetech.com.URI: http://fulllength.invitrogen.com" 148 c 117 g 255 t 26 others
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Email: segref@genoscope_rns_fr, Web - www.genoscope.cns.fr.
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Li,W.B., Gruber,C., Jessee,J.
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Shii (ggregoretegge); Site_2: Shii (ggreattatgge); 5 and 4 adaptors were used in cloning as follows: 5' adaptor 5 sequence. 5' ACGCONTAINOGCON 4' adaptor sequence. 5'-ATTAINOGCONGOGONGCONTAINOGCONGOCONGOCON 6' AND 4' (where B - A, C, O, Or T). Average insert size 1.9 C, or G and N - A, C, G, Or T). Average insert size 1.9 by P(R, this library was curiched for full-leggth clones and was constructed by clontech laboratories (Palo Alto,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R6570456 FST 10-APR-2001 GAS91412F1 NIH M67_77 HOMO Sapiens CDNA clone IMAGE:4717874 5',
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Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                    DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution: MGC clone distribution information can be
                            National Institutes of Health, Mammalian Gene Collection (MGC)
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64.2. AAGTAAPTT FOA FOAASARG FOAATGTAATTEST CRASACACTOCAGTT AGSACTGTTAT 170.1
                                                                                                      702 DAACACTALGCAACAATTAALGAFGAFFFFAAATTGAGGAAGTGATGAACTTGAGAAAA 761
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                                                                                                                                                                                                                                                                                                                       822 GAAGGATAGGATAPATELLTAAAGAGAATITGCTAAAGGTGTGGGGAGAGGGTTGTGT
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/lab_host-"DH10B (Tl_phage-resistant)"
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High quality sequence stop: 726.
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Contact: Robert Strausberg, Ph.D.
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NIH-MGC http://mgc nci.nih.gov/.
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                                                                                                                                                                                                                                                2741 AAFFFATATGFATATFFFTTAATFFAAGATGAAGACCCLTAGAAAATGTGTGTATGTA 2800
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| 12.2%; Store 692.2; 58.12.
| | Iocal Similarity 97.1%; Pred. No. 3.2c | 123;
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/tissuc_type "membrychal marrisoma, cell line"
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//note="Organ: testis, Vestor: pCMV-SPORT6; Site_1. Not;
/site_2 sail, Closed unidirectionally, oliqued primed.
Average insert sice 2.5 kb. Library enriched for full-fought clones and constructed by Life Technologies.
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1 (bases 1 to 972)
NIB MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Manmalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Homo sapiens"
                                                                                        Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone_lib="NiH_MGC_92"
                                                                                                                                                                                                                                                                                                              High quality sequence stop: 621.
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/clone-"IMAGE: 5576939"
                                                                                                               Email: cqapbs-r@mail.nih.gov
                                                                                                                                    Tissue Procurement: AICC
                                                                 Unpublished (1999)
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ASENCY/UPI_5492743 NIH_MAL_72 Homo sapiens cDNA glone IMAGE.5528814
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//tab_nost="DH108 (phage resistant)"
//note="Organ: skin; Vector: pcMv-SPORT6; Site_1: Noti;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. [ibrary constructed by Life Technologies.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email. cyapbs-r@mail.nih.gov
Tissue Productament: ATCC/DCTD/DTP
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by The I M A G E Gensortium (LLNL)
DNA Sequencia by: Agenout's Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I M A G B. Consortium/LLNL at:
                                                                                       601 TGCAAAAATGGATATTAAAAATTAGAAAAAAHITACTAATTTTACACATTAGATTTT 660
                                                                                                                                                                               661 ATTITACTATIGGAAICTGAIATACTGTGGGGCTTGGTTTTTATAACAATTTTGCCTTTTA 720
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
541 ICIAITITTAAAAISAAAIIIGAIIGAGIGOCCAIICACGAAAAIIATOCIGAAAIIC 600
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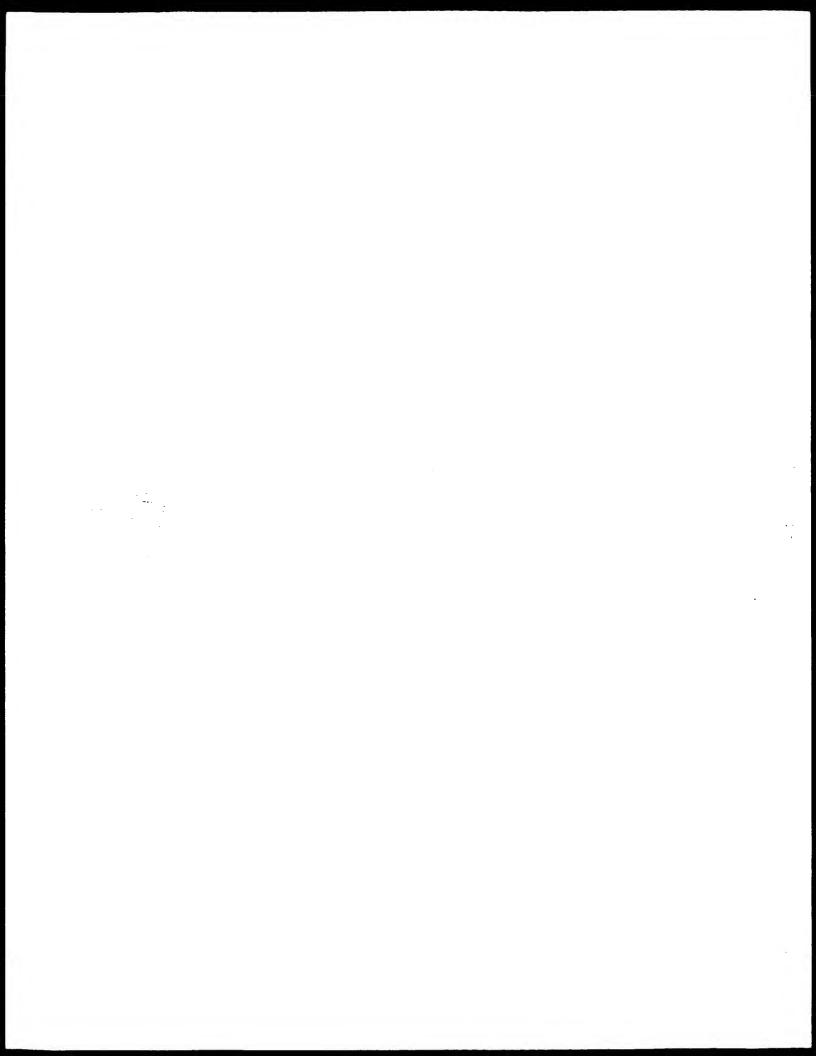
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/lab host="6H10B (phage=resistant)"
/note="urgan: liver; Vector: pCMV SPORT6; Site_1; Not1;
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1998 ATCTCCAAAGAAAAAAGGTTCAACTACGCGTGTAAATTCTAGTGCAAAATGCAAGAGAAA 1457
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Email: caapbs:romail.nih.gov
Lissue Procurement: ATCC
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Site_2: Sall; Cloned unidirectionally; oliqo dT primed. Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Life Technologies. Note; this is a NH MGC Library."
                                                                                                                                                                                             1979 ATATITCACCCCTGAAGAGTCCAIAIAAAAIILCAGAAAGGICLGCCAACACCCAAAAAA 2038
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus (strain:C57HL/64) To days embry, cana to me clone_lib:RIKEN full length enriched mouse cana library
                                                                                                                        21.2%; Score 660; DB 13; Length 672;
99.9%; Pred. No. 5.1e 117;
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/dev_stage="10 days embryo"
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                                                                                                                                                Figure civil our web site (http://genome.go.iriken.go.jp/) for
further details.
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           Karagawa 230 9045, Japan (E mail genome-resignentiken golip.
UKL:http://genome.gsc.riken.golip/. Tel:81-45-503-9222,
Fax:81-45-503-9216)
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Pred. No. 3.8e-115;
0; Mismatches 88; 1
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Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
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x	SOURCE	humap.
8	ORGANISM	Homo Sapiens
: -		Enkaryota, Metazoa: Chordata, Craniata, Vertebrata, Enteleostomi;
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AL U C C E E F F B B B B B B B B B B B B B B B B	TITLE	National Institutes of Health, Mammalian Gene Collection (MGC)
S THE	JOHNAI.	Unpublished (1999)
अस — च्या विषय	COMMENT	Contact: Robert Strausberg, Ph.D.
F #44#		Email: eqapbs-ramail.nih.dov
		Tissue Procurement: ATCC/ACTD/DIP
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- 		DNA Sequencing by: Agencourt Bioscience Corporation
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/clone_lib="nH_MGC_72"
/tissuc_type="melacetic melacema"
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/db_xret-"taxon:9606"
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DMSDLO83
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens CDNA clone IMAGEL55555905
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens CDNA clone IMAGEL55555905
AGENCOURT
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Site_2: Sall; Gloned unidirectionally. Primer: Oligo dT.
Average insert size 1.75 kb. Library constructed by Lile
Technologies."
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Mammalia; Eutheria; Primates: Catarrhini; Hominidae; Homo.
1 (bases 1 to 1051)
                                                                                                                                                                      1249 AAITTIAGGAAACITGIGAATGAGAACATTIIGATAIGICTTIATIGGGGGGGGTGIT 1308
1129 AAAGCHGRGGAAAAAATTGHGHGHGGAAAHTGGATGAGAGGGATAGAAAGTTGGAGTTGGG 11188
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ThA Library Arrayed Ey. The LA.E.S.E. Consection (LLEL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12263 row: m column: 18
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Pred. No. 5.9e-172;
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/tissuc_type="retinoblastoma"
/lab_host-"DH10B (phage-resistant)"
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Email: cgapbs-remail.nih.gov
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12) AALITIAGGAAAGIISTGAAGAAGAAAATITITGAIATGIGITTATIGGGIGGGGIGGIGTI 180
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Eukaryola; Metazoa; Chordata; Craniala; Vertebrata; Enteleostomi;
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                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph F
Email: eqapbs remail.nih.gov
                                                                                                                                                                                                                                                       NIH MGC http://mgc.nci.nih.gov/.
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                                                                                                      VEPS INN
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                                                                                                                                            Souther F
                    211.34.71
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/tissuc_type="embryonal careinoma, cell line"
/lab_host="DHIOH (phage resistant)"
/note="organ: testis: Verto: piwy Spid(); Site,1: Not1:
Site,2: Sall,; Cloned unidirectionally; oligo dF primed.
Average insert size 2.5 kb. Library enriched to:
full-tength clones and constructed by Life Technologies.
Note: this is a NHL MGC Library."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2605 AACAAGGAAGAAATGAGGATCTCAAGACTIGGIGGACACIGIGIGAAAACAAGATT 2664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2845 TGGCATTTAAAAAGTTGTAGGAGATTGTTTGGTGTTGGAAGTAAAATTGGTGTTTTA 2904
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                    cDNA Library Preparation: Lite Technologies, Inc.
cDNA Library Arrayed by: The L.M.A.G.E. Consention (LLNL)
DNA Sequencing by: Agentool Hisschede Corporation
Clone distribution: MGF clone distribution information ean be-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 ATGACTICTACTCGAACACGAATGCAAAAACCAGAAAATGAATGATGATACGATACTTCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601 TITGATIGACIGGCCAIICACGAAAAITAT4CIGAACTCTICIGGAAAAIGGAIAFTAI 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 GAAGCAGATGGAAGTAAACATCTCCCAGGAGAGTCCAAAITTCAGCAGAAACTGGCAGAA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTCTTTATGGCCACATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2785 AAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATCTTGTGTAAAATCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.3%; Score 856; DB 14; Londth 1981; 99.1%; Prod. No. 30-161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred, No. 30-161;
0; Mismatches 5; Indels
                                                                                                                   found through the L.M.A.G.E. Consortium/LLNL at a http://image.llnl.gov
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                                                                                                                                                                                                712.
                                                                                                                                                                                                                                                                                          /db_xret-"taxon:9606"
/clone-"1MAGE:6015480"
                                                                                                                                                                                                                     Location/Qualitiers
                                                                                                                                                                                                High quality sequence stop:
Tissue Procurement: AICC
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Matches 892; Conservative
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BM54FBB1 ill22 bp mPNA linear FFT to-FER-1602 51, mNA sequence. MAGE:558B245 FFM84FBB1 sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (Bookv site is destroyed upon cloning). Average insert size 2.1 kb. insert size range 1.3.5 kb. Library is normalized and curiched for full-length clones and was constructed by C. Gruber (Invitrogen). Pessarch Geneties tracking code 0.36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /hote""Olgan. Ovary (pool of 3), Vector. pCMV-SPORT6;
Site_1: EcoPV (destroyed); Site_2: Not1; PNA source pool
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukarjosta, Motarca, Chordata, Chamiata, Vortobrata, Eufodoustomi,
Mammalia; Euthoria; Primates; Catarrhini; Hominidae; Homo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4325 GAACTTACTGATTATTTTCTTCATCCAACTTATGTTTTAAATGA-GGATTATTGATAGT 3383
*145 TAGAAATTAGAAAATTACTAATTTTACACATTAGATTTTATTTTACTATTGGAATCT 3204
                                                                                                                                                                                            12.15 GALATATIGLGTGGTTGTTTTAFAAATTTTGTTTTAATTAAALAAAAGGTGGAAGCAA
                                                                                                                                                                                                                                                                                                                                                                                         265 AGTATARCCATATGATACTATACTAGTAGTGAAACAGATTTCATAGCTCAGAATGTAAAA 3324
                                                        Tissue Five attended, invitiogen conv. Library Preparation: Lile Technologies, Inc. CDNA Library Preparation: Lile Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) CONS Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the i.M.A.G.E. Consortium/LinL at: Plate: LLMM12359 row: a column: 14
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NIH MGC http://mgc nci mib gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Best Local Similarity 95.6%, Pred. No. 1.7A
Matches 927, Chisprosition 9, Mismainhes
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/db_arel="taxon:9606"
/clone="IMAGE:5588245"
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Contact: Robert Strausberg, Ph.D.
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High quality sequence stop: 773.
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2410 CTCAAAAGAGTGCTGAAGGAAGCAACCTTCCTAAACCACTGAAAAAACTACGCTTGGT Z469

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                                                                      2470 ATTERABGEATERCATERAPORAGETSSAAGTAAAGATGTGGGAGGGGGGGGGAGAATTTGAG 2529
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2710 TIATGGGGAATTIAATAIGTTAAGGTTTTTTTTTTTTGGAAGGGGGGGAAGTGGAAGTGAAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3067 ICIAICTICCAAAIGCAAIIIGAIIGACIGCCAIICAGGAAAATIALGCIGAAGTGTT 3126
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360 ATTGAAGGATCAGATGAAGGAGATGGAAGTAAAGATGTGCCAGGAGAGTGCAAAIIIGAG 419
                                                                                                                                                                                                                    420 CAGAAACTGGCAGAATGACTTCTACTGGAACACGAATGCAAAAGCAGAAATGAA 1GA 1 479
                                                                                                                                                                                                                                                                                           660 GITTGGGGGGATTCCTAAGGCACTTGAAATGTTAGTCAITGTTAITAIACAAGATTGAAA 719
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                                                                                                                                                                                                                                                                  2590 AGCATGGATACTICAAACAAGGAAGAAATGAGGACATCTCAGGACCTTGGGTGGACACGT
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High quality sequence stop: 709.
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Contact: Robert Strausberg, Ph.D.
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148 c
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                                                                                                                                                                                                                 Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                  No.81 sequence available.
This clone (DKFZp31800816) is available at the RZPD in Herlin.
Please contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Herlin Challotenburg, GERMANY: Email: clone#rzpd.de.
                                                                                                                                                   Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email's wiemannadbir beidelberg.de;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1761 GAAATOTAGGTGTGTGTGTGTTTTATAAAAAGTGTATGGGGTAGGGTATGTGGGGTT 1820
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                                                                                                                                                                                            sequenced by DKFZ (German Cancer Research Center,
                  Department Lebrach
Max Planck-Institute for Molecular Genetics
                                                                                                              Email: poustkaampimq-berlin-dahlem.mpq.de
This is the 5' sequence of the clone insert.
                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="11 (synonym: blcc2)"
/dev_stage="adult"
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0; Mismatches 1,
                                                     thnestrasse 73, 14195 Berlin, Germany
1et: -49-30-84131623
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/db vrot="tavon-94664"
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Contact: Poustka A.J.
                                                                                                                                                                                                                                     German Genome Project
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
2361 TGAGAAGITTCTAGAAAAATAAATCAGA1GGIATGIAAAGAAGAGTGIGIGIGIGATGAAAAAAA, 2420
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                               1 (bases 1 to 823)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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1 (bases 1 to 767)
NIH MGC http://mac.ncin.ib.gov/.
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National Institutes of Health, Mammalian Gene Collection (MSC)
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Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

The strain of the strain
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2711 TATGGGGAGATTTAATATTTGTGGGTGTTTTTGTGATATAAAATGTGGAGATGGAATTG 2770
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DNA Sequencing by: Incyte Genomics, Inc. Clone distribution information can be found through the 1.M.A.G.E. Consortium/LLNI, at: Plate: LLCM1568 row: h column: 03
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Fred. No. 2c-128,
0; Mismatches 18; indels 4;
                                                                                                                                                  /organism="Homo sapiens"
                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:4717874"
                                                                                             High quality sequence stop. 726
                                                                                                              Location/Qualifiers
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Bost Local Similarity 97.1%;
Matches 747; Conservative (
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//lab_host "DH108 (phage-resistant)"
//note="organ: testis: Vector: pcMV-spoRT6: Site_l: Not1;
Site_l: Shire (Lond unidirectionally; oliqoid primed.
Average insert size 2.5 kb. Library enriched for tell-length clones and constructed by Life Technologies.
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3250 AAAAGTIGGAAGGAAGAALAACGALAIGALALGALAGHAGHAGHAGAAGAAGAATILGALA 3309
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LNA Sequencing by: Agencourt Bioscience Corporation
Cloud distribution wow ejema distribution information can be
Lound through the L.M.A.G.E. Consortium/LLNL at:
http://mare.llnl.com/lln.a.p. column: 12
High quality sequence stop: 621.
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                                            660 AAAAGCTGGAAGC AAGTAFAACCATATGATACTATGATACTAATGAAAGAGATTTGATA 718
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Outpublished (1999)
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                                                                                              3310 OCTOAGAATGI AAAAGAACTIACTGATTATTTTCTTCATCCAACTTAT 3357
                                                                                                                           219 OTT AGAATG GAAGGACHACH HILLI HILLIHH HILL 757
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or Mismatches 19,
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Ab xrel-"taxon:9606"
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/clone_lib="NIH_MGC_92"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: egaphs-ramail.nih.gov
Tissue Procurement: AICC
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Mammalia; Eutheria; Primates; Catarihini; Hominidae; Homo.
1 (bases 1 to 815)
NIH MGC http.//mac.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Uppublished (1999)
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/clone_lib="NHI_MSC_72"
/lishue_type="melanotic nelanoma"
/lab host="DHHUB (phage resistant)"
/note="organ: skin: Vector: p*MV SPORT6; Site 1: Not1;
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2767 ALIGITEGGERGALICCIAAGCCACTEGAAATGITAGECALIAHTATACAAGATEG 2826
                                                                                             2827 AAAATCTTGTGTAAATGCTGGCATTTAAAAAGTTGTAGCAGATTGTTTC"FCTFCAAAA 2886
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Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
                        Tissue Producement, AldT/DCH/PDTP
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
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    835
/organism="Homo sapiens"

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Site_2: 9alf; choned unidirectionally. Primer: Oligo dr
Average insert size 2 kb. Library constructed by Life
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Prod No 1 4e-12<sup>6</sup>;
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                   Average insert size 2 kb. lechnologies."
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NIH-MGC http://mgc.ncf.nih.gov/.

(bases 1 to 672)

REFERENCE AUTHORS

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Average insert size 1.7 kb. Library enriched for full length closes and constructed by Life Technologies Note: this is a NHLMGC Library."
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Site_2: Sall, Clored unidirectionally; oligo-dI primed.
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Tissue Procurement: AICC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by. The I.M.A.G.E. Consultinm (LINE)
ENA Sequencing by Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2309 TGACTOTAAGAIOAAAAAIOITAATAIOAAIIGATGAAIOATUGAGAAGATOTOTOAGAAGI 2368
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Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241 CAGATGGAAGTAAAGATGTGCAGGAGAGTGCAAATTTCAGCAGAAACTGGCAGAAATGA 380
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                                                                                                                                                                                                               found through the L.M.A.G.E. Consortium/LLNL at:
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Plate: LEAM12026 row: k column: 07
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/clone_lib-"NIH_MGC_90"
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Eukaryola: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi: Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo. I. (bases i to 797)
2848 CALTTAAAAAGITGTAGGAGAITGITTGCTCTTGCAAAGIAAAAHGGLGGGTTTATGG 2907
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95.8%; Pred. No. 1.1e-118;
five 0; Mismatches 24;
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/db_xrot "taxon:9606"
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Contact: Robert Strausberg, Ph.D.
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lissue Procurement: Alcc
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/lab_host="DH10B_(il_phage_resistant)"
/hote="ordan: testis: Vector: pDNR-LIB (Clontech); Site_1;
Sliz_(gasegretegage), Site_2: Sliz_(aqceallatgage);
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Double-stranded CDNA was prepared from cell line RNA.
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239 AAATTTCAGAAGGTCTGGCCAACAACAAAAAATGACTGCAAGAATGTTAGTAT 298
                                                                                                                                                                           299 CAATIGGIGAAICATIGGGACTICIGAGAAGTICTAGAAATAAATTAGALGTATGTA 158
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                                                                                                                                                                                                                                                                                                                                                                                                                                              found through the L.M.A.G.E. Consortium/LLML at: http://image.llnl.gov
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High quality sequence stop: 679.
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Tissue Procurement: ATCC
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(where B = A, C or G and N = A, C, G, or T) Average insert size 1.75 kb (range 0.9.4.0 kb) 15/15 colonius contained inserts by PCF This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
and 3. adaptors were used in cloning as Iollows: 5' adaptor sequence: 5'-CACGGCCATTATGGCC-3' and 3' adaptor sequence: 5'-AITCTAGAGGCGGAGGGGGCGGCATG-dT(30)HN-3'
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Alzawa,T., Ishai,K., Kiyosawa,H., Kondo,S., Yamanaka,I.,
Saito,M., Okazaki,Y., Osjobori,I., Homb,H., Kasukawa;I., Satto,R.,
Radota,K., Matsuda,H., Ashburner,M., Hatalov,S., Casavant,I.,
Fleischmann,W., Gasterland;I., Oissi,C., King,H., Kochiwa,H.,
Ruehl,P., Lewis,S., Matsuo,Y., Nikaido,I., Pesole,G.,
Quackenbush,J., Schriml,L.M., Slaubli,F., Suzukli,R., Tomita,M.,
Waqner,L., Washio,T., Sakal,K., Okido,T., Furuno,M., Anno,H.,
Haldarelli,R., Harshi,G., Hake,J., Boffelli,D., Bojunga,N.,
Fletcher,C., Wajita M., Carthold,M., Gastincich,S., Hill,D.,
Holmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Marchionni,L., Mashima,J., Mazzarelli,J., Mombaerto,F., Nerdone,F.,
Sato,K., Schonbach,C., Sevja,T., Shakamoto,N., Sasaki,H.,
Sato,K., Schonbach,C., Sevja,T., Shibata,Y., Storch,K.F., Suzuki,H.,
Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
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HTC, CAP trapper.
Mus musculus (strain:~57PL/61) 10 days embryo
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Hayashizaki,Y.

Mus musculus 10 days embryo whole body cDNA. RIKEN full-length enriched library. Algor-2400017M22-re-1goblas-oms 1, full insert sequence.

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                                            Physical and Chemical Research (REEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), REKEN YORGHAMA 2009 LASTITUTES 17 22 Sechify class Isarumi Kaz YGKohama, Kanasawa 200 0045, Japan (E-mail:qenome-reseasc.riken.qo.jp., UKLOH.Qp./?coreseasc.riken.qo.jp., Fax:81 45-504 9216)
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Direct Sabmission.
Submitted (10 JUL 2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                              Please 918it our web site (http://genome.gsc.riken.go.jp/) for further details.
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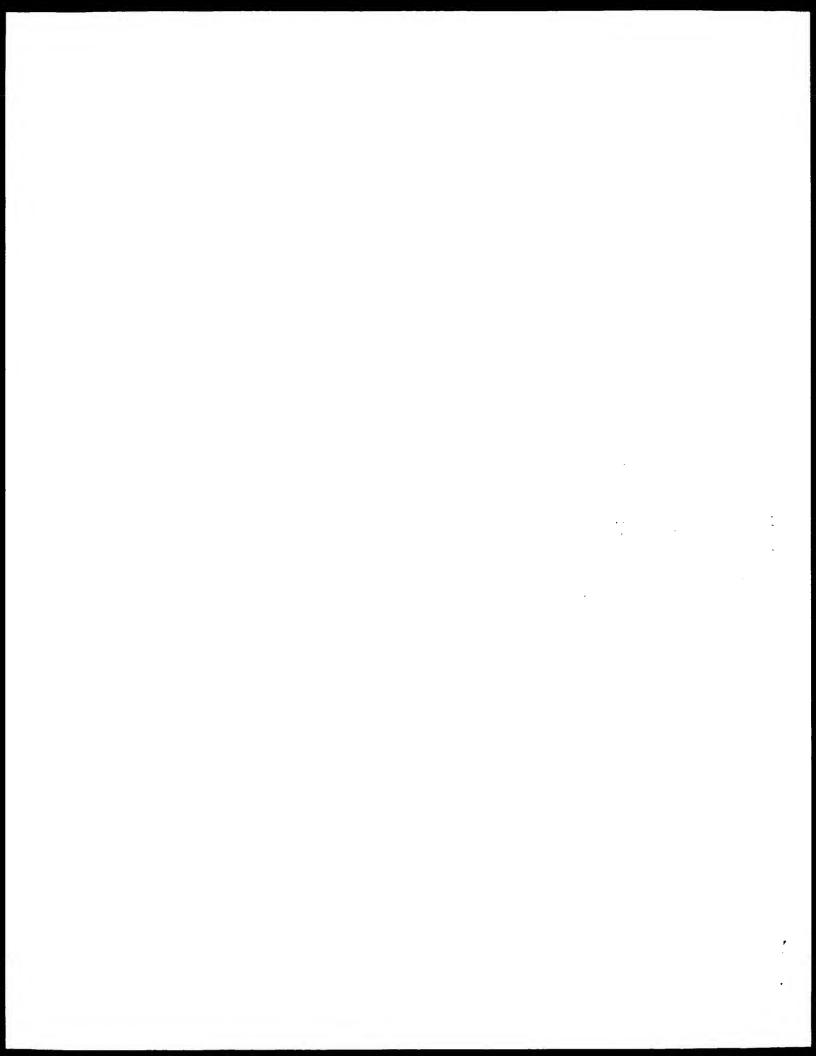
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EST 18-DEC-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Metabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Pox 8127, 660 Schib Buckla Ave., St. Louis, Mo 5310, Frmall; himoucchingate.wostl.edu, Tel: 314-362-1916, Pix: 314-777-2692."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
HM264009
fg/tfpW_X1 HE85 [s]of Hous sapleds cENA 3° similar to SWEREHIMAN
P06400 RETINOBLASTOMA-ASSOCIATED PROTEIN 7, MRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota: Metazoa: Chordata; Craniata: Vertebrata; Euteleostomi; Mammalia! Eutheria, Primates, Catarrhini; Hominidae; Homo 1 (bases 1 to 618)
Metton,D., Brown,J., Kenty,G., Permutt.A., Lee,G., Kaestnor,K.,
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Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Dr. Hiroshi inoue
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J. SENAE.
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Pids Noto,E., Garcia Correa,R., Verjesski-Almeida,S., Brischea,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Hordin,S., Costa,F.F.,
Coldman,S. H., Carvalho,A.F., Matsukuma,A., Haia,G.S., Simpson,D.H.,
Brunstein,A., deoliveira,P.S., Rucher,P., Jongeneel,C.V., O'Hare
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20n-014-006st3-2000-02-216t4-1)
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Email: asimpson@ludwig.org.br
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Laboratory of Cancer Genetics
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from ORESTES PCR (U.S. Letters Patent application No. 196, 716 - Ludwiq Institute for Canner Power Control
                                                                                                                                                                     ,716 - Ludwiq Institute for Cancer Research) profiles into the pUC-18 vector. Reverse transcription of tissue miMNA and conditionallon were performed under low stringency conditions."
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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ą	1279	ACTATCCAACAATTAATGATGTTTAAATTCAGCAAGTGATCAACCTTCAGAAAATCTG	1 138
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λο :	364	AspiledlyTyrilePheLysGluLysPheAlaLysAlaValGlyGlnGlyCysValGlu	383
q	1399	GATATAGGATACATTIAAAGAGAAATTTGGTAAAGCTGTGGGAAAGGTGTGAA GATATAGGATACATTTAAAGAGAAATTTGGTAAAGCTGTGGGAAAGGTGTGGAA	1458
ογ	384	HEGI YSEPÜLINATGIYPLIŞSLENCI YVALATGERİYLI YTATAVALIKET GLUBEN MET	₹ □
â	1459	ATTGGATCACAGCGATACAAACITGGAGTICGCTIGIATIACCGAGTAATGGAATCCATG	1518
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qq	1639	AGTACATCTGAGAATCTTGATTCTGGAACATGTTTGTCTTTCCCALCGAATCTGAATGT	1648
ς	464	LeuAsnLeuLysAlaPheAspPheTyrtysValITe31uSerPheTeLysAlad1u31y	4 H +
Q.	1699	CTIANTILANAMGCTITGATITTIACAAAGIGATGAAAAAAGITTAAFAAAAAAAAAAAAAAAAAA	1758
ς	484	AsnLeuThrArqGluMetTleLysHisLeuGluArqCysGluHisArqTleMetGluSer	5.03
qq	1759	AACTTGACAAGAGAAATGATAAAACATTTAGAAGGATGTGAACATGGAATGTGAAAGATGC	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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qq	1819	CITGCAIGGCICICAGAIICACCIIIAIIGAI (IALIAAACAA) AAAGACGAGAA	1878
ò	524	GlyProThrAspHisLengluSerAlaCysProLenAsuLenProLeuglnAsnAsuHis	54. ₹
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619 CTCTTCAGCAAATGGGAAAGGACAIGIGAACTIAIATATIIGACAAAAAGAAAGTICG 678
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Lee,W.H., Shew.J.Y., Hong.F.D., Serry,L.W., Denoso.L.A., Young.L.a..
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                                              844 LeualadlumetThrSerThrArgThtArgMetGlnLysGinLysMetAsnAspSerMet 863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human retinoblastoma susceptibility protein mRNA, complete ods
M28419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          refinoblastoma protein; retinoblastoma susceptibility protein.
Homo sapiens retinoblastoma cDNA to mRNA.
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/cell_line="retinoblastoma_cell_line_Y79, and normal
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/tissue_type="retinoblastoma"
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/db_xrel-"GDB:G00 120-184"
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Location/Qualitiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            824 GlySetAspGlaAlaAspGlySetLySHISLeuProGlyGluSetLySPhcGlnGlnLys 843
                                                                                                                                                                                                                                                                                                                                                   264 Thr ProThriys Mot Thr ProArgSer Arg HelicuVal Ser HeCly CluSer PheCly 783
                                                      684 ArqVallaatleLysGluGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPhe 703
                                                                                                                            704 MetGluargleutysthrasnileteuGlniyralaSerThraigProPreThrieuSer 723
                                                                                                                                                                                                                                                                             244 GlyGlyAsnIleTyrIleSerProLeuLysSerProTyrLysIleSerGluGlyLeuPro 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     804 ArqSerAlaGluGlySerAsnProProLysProLesLysLysLeuArgPheAspileGlu 823
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from Natl. Acad. Sci. U.S.A. 84 (24), 9659-9663 (1987)
88097427
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Human retinoblastoma associated (KB1) mRNA, complete cds.
M38647_J02994
                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (clone: p4.7R) cDNA to mRNA.
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/cell_type-"retinoblast"
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Hogg, A., Ria, R., Onadim, Z. and Cowell T.K.
Molecular mechanisms of oncogenic mutations in tumors from pathents with bilateral and unilateral retunoblastoma
Proc. Natl. Acad. Sci. U.S.A. 96 (15), 7351-7355 (1993)
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Structure and partial genomic sequence of the human retinoblastoma susceptibility gene
Gene 80 (1), 119-128 (1989)
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Mechanisms of Oncoyenesis in patients with familial retinoblastoma
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Detection of heterozygous mutations in the RBI gene in relinoblastoma parients using single-strand conformation polymerphism analysis and polymerase thair reaction sequencing oncogene 7 (7), 1445-1451 (1992)
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Zcitation-[5]
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/citation [5]
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/protein id "AARS9465.1"
/db xret "G1:793995"
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/note-"Tumor GoSl3 unilateral trameshift mutation resulting in premature stop; Associated with this mutation is a large 13q14.3 sub-band deletion; GOO 118 744" /citatoon[5]
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[ (bascs 24) to 4740)
LocyW.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lvc,E.Y.
Human retinoblastoma susceptibility gene: cloning, identification,
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Mammalia: Butheria: Primates: Catarrhini: Hominidae; Homo
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provided by E.Bookstein, 27-APR-1987.
2419 ATGCAGAGATGAAAAGAAATATTTGCAGTTGCTTCCACAGGCCCTACTTGTA 2478
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                                                                                                                retinoblastoma susceptibility.
Homo sapiens (clone: RB-[1,5]) foetus retina cDNA to mKNA.
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Ć	664	PhetysilelleValThrAlaTyrLysAspleuProHisAlaValGluGluThrPhetys 683
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A method for detecting the predisposition to retinoblastoma and a
method for detecting a retinoblastoma gene in tumors using a
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Mammalia; Eufberia; Primates; Catarrhini; Hominidae; Homo.
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                                          804 ArgSerAlaGluGlySerAsnProProLySProLeuLysLysLeuArgFneAspilleGlu 824
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OS Mus musculus (mouse)
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Search completed: January 18, 2003, 22:32:21 Job time : 3916.94 secs

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nucleic search, using sw model M nucleic January 16, 2983, 15:20:22 Run on:

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US 09:026 459A 48

4424 1 cgcgfcatgccgcccaaaac......Aaatgaggataatgatag 3323 Litte: Pertect score:

Sequences

Gapop 10.0 . Gapovt 1,9 DENTITY NOC Scoring table;

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16154066 seqs. 8097743476 residues

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Maximum bb seq length: 2000000000 Minimum DB Seq Tength: 0

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Latabase :

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Fred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		Description	BM450031 AGENCOURT	BM561083 AGENCOURT	HO4 39221 ACENCOURT	BQ220275 AGENCOURT	BM475603 AGENCOURT	AK011246 Mus museu
0.11.22.20.00		ID	1023 13 BM450031	4 HM561083	4 BG439221	1 HQ220275	13 BM475603	1 AKU11246
		Query Match Length DB ID			1.801	 		1354
	æ	Query Match 1	47.4	27.4	8.57	7.5.4	21.7	7.77
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Location/Qualifiers 1. :1023

Source

FEATURES

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BM545881 AL597811 BODDDD27 HG510661 AL562945 BG57945 BM466194	BM453724 B1868359 B18539278 B0516219 BMZ64009 BR26846	AW583181 AL599633 BG253543 AL599105 AL563411 AM5454034	AATOORS 3 AATOORS 3 AATOORS 3 AATOORS 3 AATOORS 4 BES 44 857 BET 44 857 BET 1568	HG149050 AW502887 BE168095 BT821116 HM456228 B1526982 B1526984	A1093215 ALS98766 BE865749 A1082179
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ALIGNMENTS

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Bukaryota: Metazoa: Chordata: Cianiata: Vertebrata: Enteleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
1 (bases 1 to 1023)
NIH-MGC http://mqc.ncl.nih.qcv/. cond Library Preparation: Lite Technologies, Inc., cond. Library Arrayed by: The L.M.A.G.E. Consortium (LiM.) DNA Sequencing by: Apparcourt Bioscience Corporation Clone distribution. MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at: http://meach.llnl.gov.http://meach.llnl.gov.d.col.mm...22
High quality sequence stop: 643. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact Robert Strausberg, Ph.D. Email: cqapbs-ramail nih.gov Tissue Proeurement: ALCY/RCHD/DLP BM450031.1 GI:18499071 5', mRNA sequence. BM450031 human. DEFINITION ORGANISM ACCESSION REFERENCE AUTHORS JOURNAL KEYWORDS RESULT 1 BM450031 TITLE VERSION COMMENT

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                            /clone_lib="NIH_MGC_72"
/clone_lib="NIH_MGC_72"
/tissue_type="melano"io_melanoma"
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                                                                                                                                                                                                                  Score 910.2; DB 13,
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/ordanism-"Homo sapiens"
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RM5610R3 AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMA3E:5556905
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Library constructed by Life
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                         1189 AATHETAGGAAACTTGTGAATGAGATTTTTTGALAIGTGTTTALFGCGCLGGGGTFF 1248
2749 GIPPITITATACAAGAFIFGAAAATGITGIBAATGGIGGGAFPTAAAAAAGFFIGIAGFAGA 2808
                                                                              1129 THOTATHACCGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAAGATTATGCATTCAA 1188
                                                                                               CONA Library Proparation. Life Technologies, Inc. (LLM.) BNA Squencing by Arrayed by The L.M.A.G.E. Consortium (LLM.) BNA Squencing by: Approput Bussiane Corporation Clone distribution. MGC clone distribution information can be found through the LLM.A.G.E. Consortium/LLML at:
                  /note="Organ: eye; Vector: pcMV-SPORT6; Site_1: NotI: Site_2: Sall, Cloned unid:rectionally. Primer: Oliqo Average insert size 1.75 kb. Library constructed by Technologies."
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NIH-MGC http://mge.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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/lab_host="DH10B (phage-resistant)"
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Plate: LLAM12263 row: m column: 18
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1249 GAGGTTGTAATGGCCACATATAGGAAAGTACTCTCAGAATGTTGTGATTTGTGGAACAGAT 1308
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He4 ^492.1 ^{1.041} kp ^{1.041} kp ^{1.063} Linear EST 24 MAY 2002 AGENCOURT 7766562 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6015480
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Email: eqapbs ramail.nih.gov

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/lab_host="DH100 (plage=resistant)"
/note="Grgan: testis; Vector: pr@W SPKH6: Site_1: Not1;
Site_2: Salt; Cloned unidirectionally; oligo dT primed.
Average insert size 2.5 kb. Library enriched for
tull-length clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 APATCHTCCTTTTTGTGGATATAAAATGTGCAAATGCTTGTTTGGGTTGTTTGGGTGGTTTGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2725 AAGCCACPTGAAAFGTTAGFCATFGTFTATFACAAGAFFGAAAATCTFGTGTAAAAFC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2785 TGCCATTPAAAAAGTTGTAGCAGATTGTTTGCTCTTGCAAAGTAAAATTGCTGTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3025 TTTGATTGACTGCCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGATATTAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.8%; Score 856; DB 14; Longth 1081; 99.1%; Pred. No. 1.6e-157;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
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                                                                                                                            Plate: LLAM13211 row: k column: 01
                                                                                                                                                                                                        /organism-"Homo sapiens"
                                                                                                                                                                                                                                                              /clone_lib-"NIH_MGC_92"
                                                                                                                                                                                                                          /db_xref-"taxon:9606"
/clone="IMACE:6015480"
                                                                                                                                                  High quality sequence stop: 732.
                                                                                                                                                                  Location/Qualitiers
Missue Procurement: ATCC
                                                                                                            http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.18;
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                                                                                                                                                                                        .1081
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HGCCTOTE STOCEN THE MOCEST HOMO SUBJECT CONTINUES CONTIN
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
3.85 TAGAAATTAGAAAATTACTAAFFTTAGACAFFAGAFFTFTAFFFACTAFFGGAAFCF 3144
                                                                                                                                                                                   120% ASTATAAVYAIATGATACAIAVTACTGAAAACAGAITTCATACCTCAGAATGTAAAA 3264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1265 GAACIIANIGAITATITICHICAICCAACITATGTTTTTAAATGA-GGATTATIGATAGT 3323
                                           cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L M A C.E. Consertion (ILNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information cound through the L.M.A.G.E. Consortium/LLNL at:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45% TIAAACTSTCACTCCCATGTGCTCAAAGAACCAIAIAAAACAGGTGTIAIACCCAIIA 514
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95 AAATGGAAGATGTGGTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGACTATTTTA 454
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NIH-MGC bitp://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Alissue_type-"embryonal carcinoma, cell line"
/lab_host-"DH10B (phage-resistant)"
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Contact: Robert Strausberg, Ph.D.
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1001)
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181 TAGAAAAHGATAGAAGAATTATTGAAGTIGFGFGAAGAAGATGAAIGTAATATAGA.C 240
                                                                                                                                                                                    241 AGGIGAAAAAIGITIATITCAAAAAITITAIACCITITAIGAAITCICIIGGACITGIAA 300
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                                                              575 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATG 634
                                                                                                                                                                                                                          755 AAAATAAAGATCTAGATGCAAGATTAITITIGGAICAIGAIAAAACICITGAGACIGAIT 814
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                                                                                                                                             635 ACCTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTCTTTGGACTTGTAA
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Tissue Procurement: ATCC
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BM475603
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/clone_lib="NiH_MUN_92"
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/note="crass restis: Vector: prwv SPOHTB; Site_l: Not1;
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                    Clone distribution: MGC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.aov
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DNA Sequencing by: Agencourt Bioscience Corporation
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Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S.,
Alawa, K., Itawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamahaka, I.,
Saito, T., Okazaki, Y., Golobori, F., Hono, H., Kasukawa, P., Saito, R.,
Kadota, K., Matsuda, H., Ashburner, M., Bataloy, S., Casavant, T.,
Fleischmann, W., Gasakerlaud, T., Gissi, C., Kind, B., Rochiwa, H.,
Kuchi, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G.,
Ouackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Iomita, M.,
Wagner, L., Washio, J., Sakai, K., Okido, T., Furuno, M., Aono, H.,
Haldareli, R., Barsh, G., Hake, J., Hoffelli, D., Hojunda, N.,
Carninci, P., de Bonaldo, M. F., Brownstein, M.J., Bult, G.,
Fleicher, C., Fujita, M., Gariboldi, M., Gustincich, S., Hill, D.,
Hofmann, M., Hume, D.A., Ramiya, M., Lee, N. H., Leyous, P.,
Marchionn, L., Mashima, J., Mazzarell, J., Mombaetts, P., Nordone, P.,
Kingwald, M., Rodriguez, L., Sakamoto, N., Sasaki, H.,
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enriched libraty, clone;2600017M22:refinoblastoma 1, full insert
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                                                                          902 GGACTGTTATGAACACTATCCAACAATTAATGATGTTTAAATTCAGCAACHGATCAAC 961
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Adachill, Aleawark, Akahira, S., Akimura, T., Aduo, H., Atai, A., Arakawa, T., Haldarolli, R., Homo, H., Brownstein, M., Hult, C., Carninolle, P., Phudas, S., Feknishi, Y., Erithen, M., Harayaki, T., Hara, A., Hayatsu, N., Hill, D., Firther, M., Hayatsu, N., Hill, Y., Troub, K., Casak, J., Hora, E., Imotani, K., Ishii, Y., Troub, M., Koya, S., Kato, H., Kawai, T., Kojima, Y., Kohno, B., Kouda, M., Koya, S., Kuribara, P., Matsuyana, T., Miyaraki, K., Numara, K., Numaraki, P., Ohno, M., Okaraki, Y., Shinaqawa, A., Shiraki, T., Soqabe, Y., Shibato, K., Shibato, Y., Shinaqawa, A., Shiraki, T., Soqabe, Y., Suzuki, H., Taqami, M., Taqawa, A., Shiraki, T., Tanama, Y., Toyar, Y., Yasunishi, A., Yoshida, K., Yashino, M., Muramatsu, M., and
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Exploration Research Group, RIKEN Cemomic Sciences Center (GSC),
RIKEN Yokohama Institute, i-7-22 Suchito-cho, Esurumi-ku, Yokohama,
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Encyclopedia Project of Geneme Exploration Research Group in Riken
appendir Sciences Center and Geneme Science Laboratory in RIKEN
Division of Experimental Animal Research in Riken contributed to
prepare mouse Lissues. First strand cDNA was primed with a primer
Sato F. Schentich C. Sogitt, Shibitary, Sterch.K.F., Suzuki, H. Toyo-oka, M., Wang, K.H., Weltz, C., Whittaker, C., Wilming, L., Wynshaw-Horis, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Flease visit our web site (bitp://genome.gsp.riken.go/jp/) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RINEN vokohama Institute.; 1-7-22 Suching-cho, Isurumi-ku, Yok
Kanagawa 230-0045, Japan (Bilmail-genome-resegns). Likenigo.jp.
URL http://qeneme.gsc.liken.go.jp/, [F]-R] 45-503 9222,
Fax:81-45-503-9216)
                                                                                                                          Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-490 (2001)
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/strain="C578L/65"
/3E_ATOT "TANDEM_HSECEFONG17M22"
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/db_xrot "G1:15847244"
/db_xref="MGD:MG1:97874"
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COMMENT

YETKESPPALLREPYKTAALPTNSSPFTPRRGONFSARTAKOLENUTRITEVL/KEHE CHIDEVKNYYFKNFTPFINSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFLDHD

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                                                             AGENCOURT 5505184 NIH_MGC_125 Homo sapiens CDNA clone IMAGE:5588245
                                         DST 20 FEB-2962
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tracking code 036."
                                                                                                                                                                                                                  Enkaryofa; Metazea; Cherdata; Craniata; Vertebrafa; Euteleostemi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2290 TPGGGGGCTTCTGGGAAGTTCTAGAAAATAAATGAGTGGTATGTAACAGGGGGGGTGTG 2349
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                                                                                                                                                                                                                                                                                                                                                                                                                             CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) INA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                                                                                                             NIB MGC http://mgc.nci.nib.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Oupublished (1999)
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/lab_host-"DH108"
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/db_xrel-"taxon:9606"
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High quality sequence stop: 773.
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Tissue Proeurement: Invitrogen
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onym: Line2) Homo sapiens chNA clone
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EST (Poustka,A., Wellenfeuther,R., Mewes,H.W., Well.H. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
Eukaryota: Metazoa; Chordata; Craniala: Vertebrata; Bureleostomi;
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                                                                                      2650 TIATGASCACALHAAJAICHCASCECHTHGISGAAJAJAAAAIGG AGAEGYAATT 2709
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                                                                                                                                                                                                     2710 GTTTGGGTGATTGCTAAGGGAGTTGAAATGTTAGFCATTGTTATTTATAAAAGAFGAAA 2769
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600 HTATGGCCACATITAALALGIIGAGGICTTIIIGIGGALALAAAALGIGGAGAGAGAGATI 659
                                                                                                                                                                                                                                                              660 GTTTGGGTGALTCCTAAGCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAA 719
                                                                                                                                                                                                                                                                                                                                                     This clone (DKFZp31300816) is available at the RZPD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       840 CCTGTCTGACTACTTGCCTTC-TTTGTAGCATTTAGGNGATGTTTGCTCTGGTTTTAT
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                                                                                                                                                                                                                                      Max-Planck Institute for Molecular Jenetics
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DKFZp31300816 5', mRNA sequence,
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99 99; Pred No 6,2e-132;
Berlin-Charlottenburg - GFPMANY- Email- Clone frupd do
Location-Coulliers
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                                                                            /clone="DKFEp31400816"
/clone=lib="314 (synonym: hlcc2)"
/dev_staue="adult"
/!ab_host="pH108"
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/db_vrot-"tavon-G606"
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RESULT 9 BQZZZZ27

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Site_2: Sall, Cloned uniditectionally, oligo-df primed.
Average insert, size_2:5 kt. Library enriched for
full-length clones and constructed by Lite Technoloules.
Note: this is a NIH_MCC Library."
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NIE KSP Entr //mer nei mih acce, National Institutes of Health, Mammalian Gene Collection (MGC)
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//ab_host="DH10B (phage-resistant)"
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Plate: LLAM13279 row: i column: 20
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Bmail, egaphs r'hmail.mih.gov
Tissue Procurement: AICC
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/db_xref-"taxon:9606"
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ORIGIN

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#854.0651
66261184#FT NHLMGC_60 Homo sapiens cDNA clone IMAGE:4737634 5',
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Site_E: Sfil (ggeogecteqge); Site_E: Sfil (ggecattatggee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nence: 5'-CACGGCCATTATGGCG-3' and 3' adaptor
5'-AFFCFACACGCCGAGGGGGCCACAFG-dT(30)HN-3'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (where B - A, C, or G and N - A, C, G, or 1). Average insert size 1.5 kb (range 0.9-4.0 kb). 14/15 colonies contained inserts - By PCR, This library was enriched for full length clones and was constructed by clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata: Graniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ); Double-Stranded cDNA was prepared from cell line RNA.
5' and 3' adaptors were used in cloning as follows: 5'
                        DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MCY clone distribution: MCY clone distribution information can be tound through the L.M.A.G.E. Consortium/ilML at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
664 ATAPOTTITATOAATIPTOTTOTTOTAABATOAATTPOAGTPOAGAGGTTGAAAAT 723
                                                                                                              224 CITICIAAACGAIACGAAGAAATITATCITAAAAATAAAGATCIAGAIGCAAGAITATIT 783
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                                                                                                                                                                                                                                                           691. CCAPGAAAAATAACCTTGATGAAGGTGAATGTAATTCCTGCAGAGACTGCAGTTAGG-660.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 823)
NIH MOT http://www.uci.nih.gov/
National Institutes of Health, Mammalian Gene Collection (MGC)
Onpublished (1999)
                                                                                                                                                                        481 CTTTCTAAACGATACGAAGAAATTTAFCTTAAAAATAAAGATCTAGATGCAAGATTATTT 540
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/clour=1ib="NHH MGC_60"
/issue=1yp=="ademorarcisoma"
/lab_bost="IHIOB (II phage resistant)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Stransberg, Ph.D.
Email: eqapbs r⊕mail.nih.gov
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/db xret="taxon:9506"
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BG610661.1 G1:13662032
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AL563757 ITT_NFL001_NBC4 Homo sapiens chNa clone r80hhr07YA05 3
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                                                                                         1 AGGAGAGTOCAAATTTCAGCAGAAACTGGCAGAAATGACTICIACIGGAACACGAAIGCA
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                                                                           21.1%; Score 699.5; DB-12; Longth-B24; 94.8%; Pred, No. 7e-127;
                                44; Indels
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AL564757
Query Match
Best Local Similarity 94.88
Matches 779; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Libna 111e Technologies, a division of Invitrogen 9800 Medical Center Drive Peceptials. Maryland 2086. USA May: (1) 301 618 8371 Email: fliangelifetech.com URL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       was primed with a Not1-oligo(dT) primer. Five prime end enriched, double stranded cDNA was digested with Not 1 and eloned into the Not 1 and Feo RV sires of the provisoret 6.
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Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia: Fotheria: Primates: Catarrhini: Beginidae; Homes 1 (boises 1 to 792)
Li,W.H., Gruber; C., Jessec,J. and Polayes,D.
Fuil length cDNA libraties and normalization (2001)
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                                                                                                                                                       Genoscope Centre National de Sequencage
BP 191-91006 FVPY cédex - France
Email: segrefâgenoscope cus fr. Web . www.genissoape.cus fr
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26 others
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//ab_host="phi0B"
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148 c | 117 q | 255 t
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/clone_lib="NiH_MGC_77"
/lab_hosl="DH10B (Tl_phage=resistant)"
/note="Organ: lung: Vector: pDNF-LiB (Cloutech); Site_l:
Sfil (ggcgattatagco; Site_2: Site_2: Sfil (ggccattatagco); 5 and
3' adaptors were used in cloning as follows: 5' adaptor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG570456 767 10.APR-2001
h02591312F1 NTH_MG7_77 Home sapiens cPNA clone IMASE:4717874 57,
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                                                                                                                                                                                                                   1150 TOCATGOTTAAAACGAAGAAGAAGAATTATGGATTGAAAATTTTAGGAAACTTGTGAAT 1209
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Tissue Frozament. CLORHEGH Laboratories, Inc.
CDNA Library Preparation: CLONTERH Laboratories, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MCC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
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1 (bases 1 to 767)
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/clone+"IMAGE:4717874"
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Lissue Procurement: AICC
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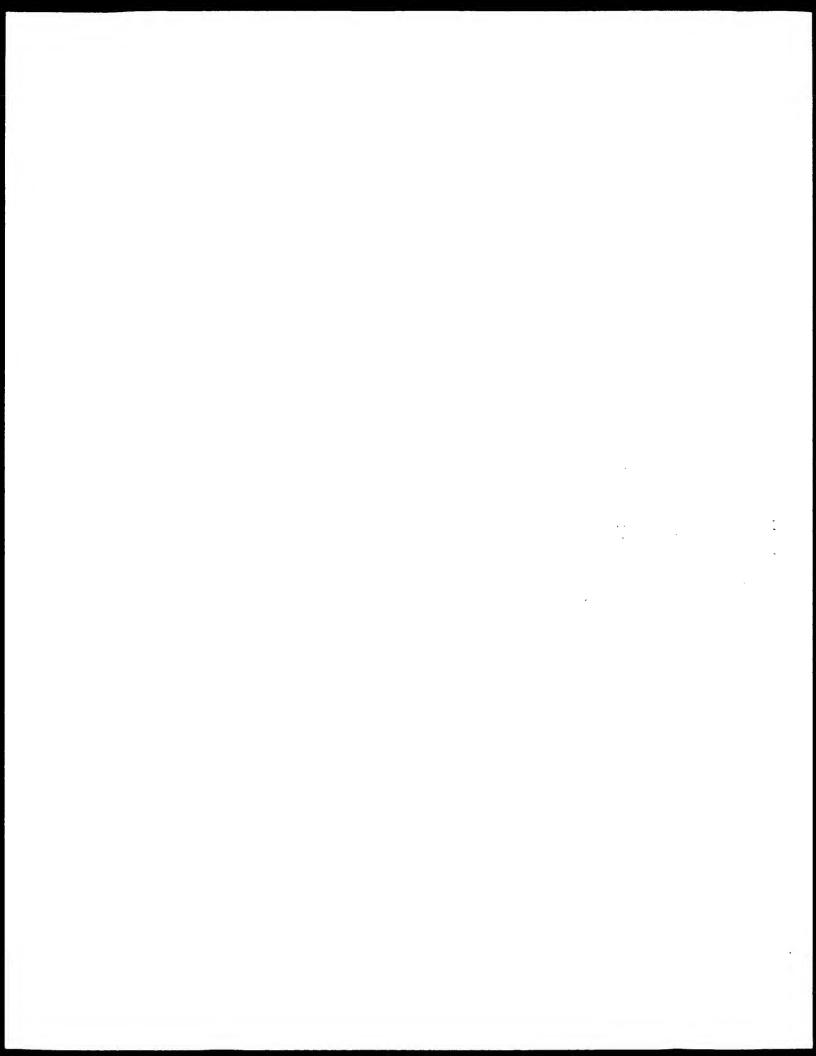
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/note="Organ: testis: Vector: pGMV-Sbekt6; Site 1; Not1; Site_2: Sall; Cloned unidirectionally: olido dT primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Lull-length clones and constructed by Life Technologies. Note: this is a NHI_MGC_Library. 2 others.
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Fred. No. 2.3e 125;
                                                                                                                  /clone_lib="NIH_MRC_92"
/tissue_type="embryonal carcinoma, cell line"
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                                                           /ordanism-"Homo sapiens"
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/lab_host "DH10B (phage-resistant)"
/mate "Chean skin Varter pGMV SEGRTE, Site 1: Netrestices: Salt: Cloned anidirectionally. Primer: Oligo dT. Average insert size 2 kb. Library constructed by Lite Technologies.
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Enkaryota: Motazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
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Tissue Procurement: ATCC
CONTRIBUTED Preparation: Life Technologies, Inc.
CENA Library Preparation: Life Technologies, Inc.
Clond Sequencing by: The L.M.A.S.E. Consortium (LLML)
NA Sequencing by: Incyte Genomics, Inc.
Clond distribution: McC clone distribution information can be
found through the I M A G F Consortium/LLNL at:
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ŝ	171	TOCAGAAAATAAATCAGATGGTATGTAACAGGGGCGTGTGGTCAAAAGAAGTGCTGAAG	180
0.7	5.469	CARDTANCT FOR BAACTACTGAAAAACTACGCTTTGATATTGAAGGALGAGATGAAG	2428
101	181	GAAGCAACCCTACTAAACCCTGAAAAAACTACGCTTTGATTGA	240
ò	67 77		2488
136	241	CADATGGAAGTAAACATGCCCAGGAGAGTCCGAAATTTGAGGAGAAACTGGGGGGAAATGA	300
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1	\$6.1	AGGAAGAAGAAATGAGGAGAGCTTGGTGGTGGTGTGTGTG	420
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7.7	2669	CTTCAGCTCTTTTGTGGGATATAAAATGTGCAGATGCAATTGTTTGGTGATTCCTAAGC	2728
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Search completed; January 18, 2003, 04:08:48 Job time : 2939,95 sees



GenCore version 5.1.3 Copyright (c) 1993 2003 Compages Ltd.

nucleic search, using frame_plus_p2n model ow protein

Run on:

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US 09 026-459A-43 Perfect score;

1 MPPRTPRKTAATAAAAAAEP.....TRMQKQKMNDSMDTSNKEEK 859 sequence:

Scorting tables

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16154066 seqs, 8097743376 residues Searched: lotal number of hits satisfying chosen parameters.

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

34.8 1051 13 BM561083 RM561083 34.7 1364 11 AK011246 AK011246 8.3.5 1364 11 AK011246 AK011246 8.2.7 1364 11 AK011246 AK011246 8.2.7 185 13 BM45324 BM56032 2.2.9 1001 13 BM475603 BM476603 8.2.1 1023 13 BM476031 BM476603 1.2.4.9 1023 13 BM476031 BM476603 1.2.5 1023 13 BM476031 AM764485 1.2.4.9 1023 13 BM476033 BM476003 1.2.5 2.3.4 10 AM763485 AM764485 1.2.5 2.2.6 13 H1151568 AM764485 2.2.1 8.2.1 0 AM764485 AM776343 2.2.2 8.2.1 0 AM764485 AM776343 2.2.2 8.2.1 0 AM764485 AM776343		ે પ્ર	Soute	Match	Match Length DB	£	G.	Description
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REFERENCE AUTHORS

TITLE

Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo. L. (bases 1 to 1051)
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
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Arakawa.T., Baldarelli,R., Bono,H., Brownstein,M., Bult,C.,
Carminci,P., Frikuda.S., Fikunishi,Y., Furuno,M., Banaqaki,T.,
Hara.A., Hayatsu.N., Hill,D., Hiramoto,K., Hiraoka,T., Hori,F.,
Hume.D. Imorani,K., Ishi,Y., Itoh.M., Izawa,M., Kasakawa.I.,
Kato,H., Kawai,J., Kojima,Y., Konno,H., Kouda,M., Koya,S.,
Numacaki,R., Ohno,M., Okazaki,A., Nishi,K., Nomura,K.,
Numacaki,R., Ohno,M., Okazaki,A., Nishi,K., Nomura,K.,
Saito,H., Saito,R., Sakai,C., Sakai, K., Sano,H., Sasaki,E.,
Soyabo,Y., Saito,R., Shibata,K., Shinaqawa,A., Shiraki,F.,
Ishaka,I., Iejima,Y., Ioya,I., Yamamura,I., Yamamaka,I.,
Yasunishi,A., Yushida,K., Yoshino,M., Muramala,M., and
Biayashizaki,Y., Sushida,K., Yoshino,M., Muramala,M., and
                                                    Arakowa T. Hara, Shihadawa, A., Shihada, Y., Yoshino, M., Itoh, M., Ishii, Y., Arakowa T. Hara, A. Pukunishi, Y., Krono, H., Adachi, J., Fukuda, S., Arakowa T., Hara, A. Pukunishi, Y., Krosawa, H., Kadachi, J., Fukuda, S., Shizawa, M., Ishi, K., Shito, B., Shito, H., Kasukawa, T., Saito, B., Kadota, K., Marsuda, H., Ashburner, M., Ratalov, S., Casavant, T., Sitto, P., Peristelland, H., Toshida, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kuchi, P., Lowis, S. Marsud, Y., Nikaido, I., Pescola, G., Marsud, Y., Nikaido, I., Pescola, G., Marnia, M., Wanner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H., Haldarell, R., Bassh, G., Hlake, J., Boffell, D., Bolunga, N., Carninel, P., de Boraldo, M., Brownstein, M., Jung, D., Garninel, P., de Boraldod, M., Gustineich, S., Hill, D., Holmanin, M., Bung, D., Gariboldi, M., Gustineich, S., Hill, D., Marchicui, L., Mashio, T., Kamiya, M., Lee, N. H., Lyonis, P., Nordone, P., King, B., Rimwald, M., Rodriguez, L., Sakamoto, N., Sasaki, H., Suzuki, H., Toyo oka, K., Schoubach, C., Seya, T., Shibalay, Y., Storch, K., Schoubach, C., Seya, T., Shibalay, Y., Storch, K., Kohtsuki, S., and Hayashizaki, Y., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S., and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prepare mouse tissues. First strand cond was primed with a primer for GoldschafedAnfedAnfedTripting 14, cond was prepared by using trebulose thermo-activated reverse transcriptase and subsequently enriched for full-length by cap-trapper. Second strand (GM was prepared with the primer adapter of sequence [5] dadacadachicicosofila and share coordinated and sequence [5] with Nhol and Ssti. Cloning sites, 5, cond: Nhol; 3, cond: Ssti.
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/dev_stage="10 days embryo"
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Encyclopedia Project of Genome Exploration Research Group in Ri
Genomic Sciences Center and Genome Science Laboratory in PIKEN
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Nature 409 (6821), 685-690 (2001)
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/db_xret="taxon:10090"
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EST (Poustka,A., Wellenrouther,R., Mewes,H.W., Weil,B. and Wiemann
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This clone (DKFZp31800816) is available at the KZPD in Berlin.
Please contact the KZPD: Ressourcenzentrum, Heubnerweg 6, 14059
Herlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
Lecalion/qualiliers
                                 499 Leuser HedladsapheSerLysLeuLeudsanAspAsalle-PhellisMet Ser-LeuL 418
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78 1 TTATCCATTCAAAATTTTAGCAAACTTCTGAATGACCAGATTTTTTCATATGTCGTTTAT 842
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/lab_host-"DH10B"
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BM453724 835-Pp mRNA linear 1831-05-FTB 2002
AGENCOURT_6402743 NIH_MGC_72 Homo Sapiens CDNA elene IMAGE:5528814
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
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                                                                                                                                                                      241
                                                                                                                                                                                                                         654 IlelleValThrAlaTyrLysAspLeuProHisAlaValGlnGluThrPheLysArqVal 573
                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                       674 LeulleLysGluGluGluTyrAspSerIleIleValPheTyrAsnSerValPheMetGln 693
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             774 GluLysPheGlnLysIleAsnGlnMetValCysAsnserAspArqValLeuLysArqSer 793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              794 AlaGluGlySerAsnProProLysProLeuLysLysLeuArqPheAsp11eGluGlySer 813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be tound through the Lim.A.G.E. Consertium/LINL at: http://mage.lln.aov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     National Institutes of Health, Mammalian Gene Collection (MGC)
                                                     122 CTTTTCCAGCACACCTGCAGAATGAGTATGAACTCATGAGAGAGGAGATTTGGACAAA 181
                                                                                                              634 llemetMetCysScrMetTyrGlylleCysLysValLysAsiileAspheulysPhetlys
                                                                                                                                     754 ThrtysMetThrProArgSerArg11eLeuValSer11eG1yG1uSerPheG1yThrSer
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Tissue Procurement: ATCC/DCTD/DTP
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NIH MCC http://mgc.nci.nih.gov/
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Mismatches:
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Technologies." 210 c 137 g 233 t.
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                                                                                                    /db_xref="taxon:9606"
/clone="IMA311.5528814"
Location/Qualifiers
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FEATURES
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HMA75503
AGENCOURT_5480007 NIH_MGT_92 HOMO SAPIONS CDNA clone IMAGE:5575683
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NIH-MGC http://mgc.nol.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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/lab_host="DB10B (phage-resistant)"

/note="Organ: testis; Vector: pCMV-SPORT6: Site_1: Not1;

Site_2: Sai; Cloued unidirectionally; oliqo-dI primed.

Average insert size 2.5 kb. Library enriched for full.length clones and constructed by Life Technologies.

Inl. Length clones and constructed by Life Technologies.

Note: this is a NH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA Library Picpatation, Life Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G. Consortium (LLNL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be found through the T.M.A.G.E. Consortium/LLNL at:
Plate: LLAM12326 row: f column: 04
                                             728 CCCCTTACANTETTOCTAGILLCANOCTITACCCAATICCCTGGGAAGCCACCATCC 787
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Mismatches:
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Matches:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
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Location/Qualifiers
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Mammalia; Entheria; Primates: Catarrhini; Hominidae; Homo.
15.4 ValleuAspTyrPheIleLysLeuSerProProMetLeuLeuLysGluProTyrLysThr 172
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National Institutes of Health, Mammalian Gene Collection (MGC)
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                  17.4 AlaValileProfleAssalySerProArgTbrProArgArqGlyGlaAsnArgSerAla 192
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found through the L.M.A.G.E. Consortium/LLNL at:

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http://image.ilnl.gov

High quality sequence stop: 606.

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full-length clones and constructed by Life technologies.
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1 (bases 1 to 1023)
NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
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High quality sequence stop: 643
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: cgapbs-r@mail.uih.gov
Tissue Procurement: ATCC/DCTD/DTP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism-"Homo sapiens"
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Maria, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, L., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Theising, B., Wylie, T., Lennon, G., Soares, B., Wilson, P. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ES: 27-JAN-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA763411 vw54a04.rl Scares_mammary_gland_NMLMG Mus musculus cDNA clone IMA7E:1247598 5 similar to gu-M154un RETINGHLASIOMA-ASSOCIAIED PROTEIN (HIMAN); gb-M26391 Mouse retinoblasioma susceptibility
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                                                                                                                                                                                                                                                                                                   784 CysAsnSerAspArgValLeuLysArgSerAlaCluClySerAshFroFroLysFroleu 803
                                                                                                                                                                                                                                                                                                                             824 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMctGln 843
                                                                             744 TyrLysIleSerGluGlyLeuProThrProThrLysMet.ThrProArgSerArglleLeu 763
                                                                                                                                                                                         764 ValScrilcGlyGluSerFheGlyThrSerGluLysPheGlnLysIleAsnGlnMctVal 783
                                                                                                                                                                                                                   804 LysLysLeuArgPheAsplieGluGlySerAspGluAlaAspGlySerLysHisLeuPro 823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242 CCTAGTTCACCCTTACGATTCCTGGAGGGAACATCTATATTTCACCCTGAAGAGICCA 301
                                                                                                                                   302 TATAAAATTTCAGAAGGTCTGCCAACACACAAAATGACTCCAAGATCTIA 361
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108 Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              free through LLNL
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High quality sequence stop: 422.
Location/Qualifiers
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/Lissue_type="mammary gland"
/lab_host="DH108"
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WashU-HHMI Mouse EST Project
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/db_xref="taxon:10000"
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AA763411
AA763411.1 G1:2813158
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with a Not I - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not and cloned into the Not I and Eco RI sites of the modified pl?13 vector. Library is normalized. Library was constructed by Hento Soares and M. Patima Honaldo."

Conservative: Mismatches: Indels: Matches: Length: Gaps: 6.160-95 1056.50 82.148 75.978 23.73% Best Local Similarity: Percent Similarity; Aliqument Scores: Query Match: BASE COUNT ŝ RIGIN Secure

US 09 026 459A-43 (1-859) x AA763411 (1-914)

306 267 PholouAspHisAspLysThrLeuGlnThrAspSerIleAspSerFheGluThrGlnArq 286 914 PEPETEGGATCCAGAATAAACCCTCGAGGTGT - FCCTTTFAGGCCTFTTTFAAAGCGGGAG 857 287 Thr ProArgLysSer AsrdeuAspGluGluValAsnValIleProProHisThrProVal 9 5 â

807 ArgihrValMetAshThrileGinGinLeuMetMetileLeuAshSerAlaSerAspGin 326 797 ROBOSTIGITI I GGAACCTA LOCAACAATI TATTIGITGATITITAAACTICGGCGAATIGACGC 738 Ê 3

618 927 ProSerGluAsnLeufleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle 5 <u>2</u>

447 LenhysArgValtysAsptleClyTyrtlePhetysClutysPheAlatysAlaValCly 366

Š ŝ 622 OCAUGOTOTOTOACCATICOGAGTAÇAACCATATAAACTITTGAGTOCGATICOTATTAGGG T 563 £ ŝ

/note-"Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA

3 =

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467 | Helysaladludlyasniculbrarqdinmet HelyshisicudunarqCysGluHis | 486 | HILLE | HELLI | HILLE | HILL 422 ATCAAAGTGGAAGCCAACTTGACAAGAGAAATGATAAAACATTTAGAAAGATGTGAGCAT 263 ŝ 12 5

487 ArgiloMetGluSerizeuAlairpLeuSerAspSerProLeuPheAspLeuileLysGin 506 507 SerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 526 262 CGAATCATGGAATGCCTTGCATGGCTTTCAGATTCACCTTTTATTTTGATCTCATTAAGGAG 203 Š ŝ ŝ 202 PCCAAGGA FGGAGAGGACCE - - GAPAACCEDGAACCEGCTTGTCCTCTCAGCCTGCCT 146 527 LeuGinAsaAsaHisihrAlaAlaAspMetTyrLeuSerProValArgSerProLysLys 546 <u>2</u> â

AL563757 LTI_NFL001_NBC4 Homo sapiens cDNA clone CS0D0007AA05 4 PL563757 AL563757 Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo. 547 LysslyserThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 566 Genoscope - Centre National de Sequencaqe HP 191 91006 EVRY cedex - France Email: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr. 1 (bases 1 to 792) Li,W.H., Gruber,C., Jessec,J. and Polayes,D. Fell:length cbMA libraries and normalization Unpublished (2901) /tissue_type="neuroblastoma_cells" /lab_host="DH10B" /clone_iib="LII_NFL00;_NBC4" /sex="male" /organism-"Homo sapiens" /db_xref-"taxon:9606" /clone-"CS0DD007YA05" Location/Qualifiers 567 PheGlnThrGlnLysProLeuLys 574 25 TICCATACTCAGAAGCCATIGAAA 2 AL563757.1 GI:12913464 Contact: Genoscope .792 Homo sapiens human. EST source DEFINITION AL563757/C ORGANISM RESULT 10 ACCESSION REFERENCE AUTHORS TOTTENAL KHYWORDS FEATURES VERSION SOURCE LOCUS

792 217 7 38 Matches: Comservative: Mismatches: Longth: indels: 1.12c-93 1043.00 84.53% 81.89% Best Local Similarity: Percent Similarity: Aliqnment Scores: Query Match: .. လ BASE COUNT ORIGIN Pred.

US-09-026-459A-43 (1-859) x AL563757 (1-792)

171 LysThrAlaVallleProlleAsnGlySerProArqThrProArqArqGlyGlnAsnArq 190

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191 SerAlaArgileAlaLysGlnLeuGluAsnAspThrArgileileGluValLeuCysLys 210 ò

211 CluftisCluCysAsnTlcAspCluValtysAsnValTyrthetysAsnphettertable 230 [1511111111111111] ò

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PEATURES
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Clone from 8 Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKT2); Email 8 welmann@dkfz heidelberg.de;
sequenced by BMFZ (Blondedical Research Center at the Charite,
Berlin/Germany) within the CDNA sequencing consortium of the German
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DKF7P413P042_r1 313 (synonym: hlcc2) Homo sapiens cbNA clone
NKF7P313P092 5', mRNA sequence.
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Eukaryota, Metazoa: Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia: Putheria: Primates: Catarriini; Homisidae: Homo.
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Unpublished (1999)
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No st sequence available. This structure of the error in worth this clone (DMEPFATAPPA) is available at the error in worth PEFasse content the TAPE. Ressourcencemberth methors of 14059 Berlin-Charlottenburg, GFFMANY. Email: clone-strop de

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Nagai,M.A., da Silva,W. Ji., Zago,M.A., Hordin,S., Costa,P.F., oblidance if . carvalho,A.F., Matewidma,A., Helia,C.S., Simpson,D.H., Brunstein,A., deoliveina,P.S., Burber,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.K., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This sequence was derived from the PAPESP/LICE Human Cancer Genome revolect. This entry can be seen in the following UKL (http://www.lideri.org.be/seripts/gethtml2.plc:1-kt2-RC2 BT0642 210 200-014-006A 1-2000-02-21A44-1)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   into the put 18 vector. Reverse transcription of tissue mena and cDMA amplification were performed under low stringency conditions."

1.09 c. 127 g. 226 t. I others
                                                                                                                         ] (bases ] to 644)
Dias Neto,E., Garcia Correa,E., Verjovski-Almeida,S., Briones,M.R.
                                                Homo sapiens
Eukaryota: Metazoa; Chordata: Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509–010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                     Shotqun sequencing of the human transgriptome with ORF expressed
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                                                                                                                                                                                                                                                                                                                                                     Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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High quality sequence stop: 669.
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/clone_lib="B10642"
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                                                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory of Cameer Genetics
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                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Simpson A.J.S.
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Fax: -55 11 2707001
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Melfon, D., Meadows, A., Cliffton, S., Hillier, L., Maria, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Thershou, R., Ritter, Wylie, T., Martin, J., Bennett, J., Cardenas, M., Gibbons, M., Mydam, R., Cole, R., Tsaqareishyli, R., Williams, T., Jackson, Y., and Nowers, Y., WashU-Harvard Pancreas EST Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 14-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryola; Metazoa: Chordata: 'raniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
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IMAGE:5638049 5' similar to qb:MI5400 RETINOBLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                       317 TTTGATTTTTACAAAGTGATGGAAGTTTTATGAAAGGAAAAGGGAAGTTGACAAAGAA 258
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                                                                                               437 LeuAspSerGlyThrAspLeuSerPheProTrpIleLeuAsaValLeuAsmLeuLysAla 456
                                                                                                                                                                                              457 PheAspPheTyrLysVall1PG1uSerPheIleLysAlus1uG1yAspLeuThiArgG1u 476
                                                                                                                                                                                                                                                                                           477 MetiletysHistenGluArqGysGluHisArqIleMetGluSerLenAla1rpleuSer 496
417 LeuteuAlaCysAlateneGluValValMetAlathrIyrSerArgSerThrSerGlnAsn 436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Douglas Melton, Kiaus H. Kaestner, & Hiroshi Inoue
                                                                                                                                                                                                                                                                                                                    536 tTyrLeuSerProValArqSerProLysLysCysGlySerThrThrArqVal 553
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/tissue_type-"Islets of Langerhans"
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Email: dmelton#biohp.harvard.edu
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/dev_stage="Adult"

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wassada Unicar EST 27-Jan-1998 vastatola ri scares neumraty_diand_NMIMC Mis muscribus chwa clone imade:1247665 % similar in ap-Miston PETINOHLASTOMA ASSOCIATED PROTEIN (HTMAN); qb-M26391 Meuse retinoblastoma susceptibility AA263485
                /hote="Uryan, Fancteds, Vector, pSrOkll, Site_1: Not i, Site_2: Sal 1; Library constructed using Superscript Plasmid Library kit. (Lite Technologies). cDNA made by oliqo-df priming. Size-selected by column fractionation; average insert size 1.08 kb. Primary library.
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/lab_host-"DH108"
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// Organism="Mus musculus"
/db_xref="taxon.10090"
/db_xref="taxon.10090"
/clone=_lib==Soarces_mammary_gland_NMIMG"
/clone=_lib==Soarces_mammary_gland"
/clone=_lib==Soarces_mammary_gland"
/lasue_type=="mammary_gland"
/lasue_type==mammary_gland"
/lab_host===bll08"
/note=="Vector: pr773D-Pac (Pharmacia) with a modilied
polylinker; lst strand cDNA was prepared from mammary
gland tissue from a lactating female, and was then pr1med
with a Not I - ollog(d7) primer. Double-stranded cDNA was
ligated to Eco RI adaptors (Pharmacia), digested with Not.
I and cloned into the Not I and Eco RI sites of the
modified pr773 vector. Library is normalized. Library
was constructed by Bento Soales and M. Fathma Houaldo."
2 others
                                                                                                                                                        Marra,M., Hillier,L., Allen,M., Howles,M., Dietrich,N., Pubuque,T.,
Geisel,S., Kuraba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and
                                                  Mus musculus
Eukaryota; Metazoa; Chordata; Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria; Rodentia, Sciuroquathi, Muridae; Musinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This clone is available rayally free through LINE, tentach the 
IMAGE Consortium (info@image lin) gov) for further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           744 GOCCAHOGGAAAAANTHGFFOOTGCTTCCATATTGTCCGTTACCTTACCTCCAAAGAACAAFC 685
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                                                                                                                                                                                                                                                                                                                                                  Contact, Maria M/Mouse ESI Project
Washington Injoursity School of Medicinep
Washington Injoursity School of Medicinep
444 Forest Park Parkway, Box 8501, St. Lo
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seq primer: -28m13 rev2 ET from Amersham
High quality sequence stop: 495.
[location/Qualifiers
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Conservative
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Indels:
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                                                                                                                                                                                                                                                                                                The WashU-HHMI Mouse ESI Project
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: mouseest@watson.wustl.edu
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                               house mouse.
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H0254544 BT 13-FEB-2001 602464278F1 NIH_M0C_90 H0mc sapiens cDNA clone IMAGE:4472611 57,
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Eukaryota: Metazoa: Chordata; Graniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                              106 ystantanAsnAspAsnIIcPhcHisMctSerf.cuf.cuAlaCysAlat.cuGtuValValM 426
                                                                                                                                                                                                                     426 etAlaThrTyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheP 446
                                                                                                                                                                                                                                            446 roTrp11e1euAsnValLeuAsnLeuLySAlaPheAspPheTyrLysValI11eG1uSerP 466
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524 amadagmaaaandaandagaamadagaanahacaamadaamadaamaandhamaa 565
                                         486 rqValMetGluSerMetLeuLysSerGluGluGluArqLeuSerlleGluAsaPhèSerL 406
                                                                                                                                                                         504 CAGTOCTAAATGACAACATGTTTCATATGTCTTATACTGGCCTGTGCTCTTGAAGTTGTAA 445
                                                                                                                                                                                                                                                                                                                                                     484 CGTGGATTCTGAACGTACTTAALITAAAAGCCTTTGATTTTTACAAAGGTGATTGAAAGTT 325
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                                                                                                                                                                                                                                                                                                                                                                                              the helletysAladinGlyAsmicuthrArgGluMetiletysHisLeuGluArgCysGluH
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Contact: Robert Strausberg, Ph.D.
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/db_xref-"taxon:9606"
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NIH MGC http://mgc.nci.nih.gov/.
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                                                                                                                                                      Email: eqapbs-ramail.nih.gov
lissue Procurement: AICC
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Site_2: Sall; Cloned unidirectionally: Oldo dl primed.

Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NH_MGC Library."
              /clone_lib="wiH_MGC_90"
/tissue_type="adenocarcinoma, cell line"
/fishue_type="adenocarcinoma, cell line"
/host="MHIOM (phage=resistant)"
/note="organ: liver; vector; pGMV SPORTG; Site_l: Not1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61 GCATTG-GACCAAATTATGATGTTCCATGTATGGCATATGCAAAGTGAAAATA1AGA 119
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Search completed: January 19, 2003, 05:06:48 Job time: 1912.46 secs

Copyright (c) 1993 2003 Compugen Eld.

oM nucleic nucleic search, using sw medel

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January 16, 2003, 15:20:22; Search time 277).81 Seconds (without alignments) 18469.506 Million cell updates/sec

Littles Perfect scores

US US UZ6 459A 44 3161 | CONDICATORCOPOCAAAAC......AAATIGAGGATTATIGATAGT 3161 Sequences

DENTITY NIC Scoring table:

Gapop 10.0 , Gapext, 1.0

16154066 seqs. A047743476 residues Searched:

4230R142 Potal number of hits satistying object parameters.

Maximum DB seq length: 2000000000 Minimum DB seq length: 0

Post processing: Minimum Match 10% Maximum Match 100% Listing Lirst 45 summaries

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T)	NIH-MGC http://mac.nci.nih.gov/.
il ki	National Institutes of Health, Mammalian Gene Collection (MGC)
OXH	Unpublished (1999)
Final C	Contact: Robert Strausberg, Ph.D.
Tissue P	Email: cqapbs-remail.nih.qov
	Tissue Produrement: ATCC/pCTD/DTP
THE VACO	CDNA Library Preparation: Lile Technologies, Inc.
CDNA Li	CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (11.NL)
DNA Seq	DNA Sequencing by: Agencourt Bioscience Corporation
Clone d	Clone distribution: MGC clone distribution information can be
found th	found through the L.M.A.G.E. Consortium/LLNL at:
ht t p://i	http://image.llnl.gov
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/lab_host="DH10H (phage-resistant)"
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/note="Organ: Skin, Vector: pcMV-SPORID; Sile_l: Noti:
/note="Organ: Skin, Vector: pcMV-SPORID; Sile_l: Noti:
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AGENCOMPT_6566133 NIH_M3C_67 Home Sapiens cDNA clone IMAGE:5550905
5', mRNA sequence.
BM561083
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Site=2. Sall, Glosed unidirectionally. Filmet. Silgo dl.
Average insert size 1.75 kb. Library constructed by Life
Technologies."
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mummalian Gene Collection (MGC)
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98.4%; Pred. No. 1.6e-167;
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Plate: LLAM12263 row: m column: 18
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Email: cgapbs-rémail.nih.gov
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Mammalia; Eutheria; Primates, Catarrhini, Hominidae, Homo.
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                                                                           181 GAGGTTGTAATGGCCACATATAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGAT
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/clone_lib=NNIH_MGC 9.2
/lissue_type="embryonal carcinoma, cell line"
/lab_host-'DBIOB (phare-resistant)"
/note_anger: testis: Vector: pcMV Shekle: Site 1: Not1:
Site_z: Sale: Cloned unidirectionally; offqo df primed.
Average insert size 2.5 kb. Library enriched for
lull-length clones and constructed by Lite Technologies
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Plate: LLAM13211 row: k column: 01
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Contact: Robert Strausberg, Ph.D.
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BQ220275
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ADENCARELESUSIBE NIH_MGC_125 Homo sapiens cona clone IMAGE:5588245
57, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /hote-"Cidan: ovaly (pool of 3), Vector: pCMV-SFGRIG; Stel=1: EcoRV (destroyed); Site_2: Not!; RAN Source pool of three evaries, from females ranging in age from 81 to 49 yo. Library is oliqo-dT primed and directionally cloned (FocNV site is destroyed upon cloning). Average insert size 2: kb, insert size range 1-3:5 kb, library is normalized and enriched for full-length clones and was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          constructed by C Gruber (Invillenges). Posearch Genetics tracking code 036." 359 t. 2 others
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Mammalia; Eutheria: Primates, Catarrhini; Hominidae, Homo.
2024 TAGAAATTAGAAAAAAATTACTAATTTACACATTAGAITITATTITACTATIGGAAICT 2982
                                                                                FIZE TICCCCAPTICICAGAAGTTCCAGAAAATAAATCAGATGGTATGTAACAGGGACGGTGTG 2187
                                                                                                                                                                      3443 AGTATAACCATATGATACTATCATACTGAAACAGATTTCATACCTCAGAATGTAAAA 3102
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation (Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                 28 GATATACIGIGICTICTITITATAAAATITIGCTITT-ATIAAAIAAAAGCTGGAAGCAA 778
                                                                                                                                                                                                          77.9 AGIATAANCATAIGATACIAICATACTGAAACAGATTTCATACCTCAGAATGTAAAA 838
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NIH-MST http://mgc.nri nih.gov/
National Institutes of Health. Mammalian Gene Sollection (MSS)
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                                                                                                  Omer: Match 23.2%; Secre 752.4; PH 13; Longth 1122; Best Local Similarity 95.6%; Pred No. 7 5e-137;
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Or Mismatches 32;
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Contact Robert Strausborg, Ph D
Email: cgapbs-r@mail.nih.gov
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High quality sequence stop: 773.
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/clone="IMAGE:5588245"
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                     899 TAATTIATAATGGATATTTTTTTAATTTAAAANAANGGGTIAGAAAAIGIGGGGG 958
420 CAGAAACTGGCAGAAAIGACITCIACIGGAAGACGAAIGCAAAAGCAGAAAAIGAI 479
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National Institutes of Health, Mammallan Gene Collection (MGC)
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/clone_lib="Nim_MGC_02"
/tissue_lype="embryonal carcinoma, cell line"
/lab host="lbHlOB" (phage-resistant)
/lab host="lbHlOB" (phage-resistant)
/nore-ordan, testis; Vector: pCMV-SigR(b) Site_l: Not1;
/nore-2: Sall: Cloned unidirectionally; oligo_dl_primed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Average insert size 2.5 kb. Library enriched for tell-length clones and constructed by Life Technologies. Note: this is a NH_MSC Library."

1.49 c. 155 g. 264 t.
                                    CORN Library Preparation: Lite Fechnologies, Inc.
CORN Library Arrayed by: The I M.A.G.E. Consortium (LLNL)
LNA Sequencing by: Abencourt Bioscience Corporation
Clone distribution: MCC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
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/organism="Homo_sapions"
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Email: eqapbs ramail.nih.gov
                        Dissue Procurement: ALCC
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DKFZP3190816_11 313 (synonym: blcc2) Homo sapiens cbwn clone
DKFZp31300816 5', mkwa sequence.
AL597811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.).
EST (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Heidelberg/Germany) within the cDNA sequencing consortium of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"Vector: pTriplEx2: Site_1: SliIA; Site 2: SliIB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: poustka*mpimg-berlin-dahlem.mpq.de
This is the 5' sequence of the clone insert
Clone trom S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKF2) Email s.wiemann@dktz-heidelberq.de;
sequenced by DKFZ (German Cancer Research Center,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Please contact the RZPD: Ressourcenzentrum, Heubnerwey 6, 14059
Herlin-Charlottenburg, GERMANY; Email: clone472pd.de.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1539 GAAATCTACTCTCTCTCACTGTTTTATAAAAAGTGTALCGGCTAGCCTALCCCACL 1598
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977 GAGTAATGGAATGCATGTTAAATGAGAAGAAGAAGATTATGGATGAAAATTTAAGA TÖ36
                                                                                        .037 AACHTCTGAATGACAAGA-TTTTTTCATAIGT-CTTTATTGGCGTGCGCLCTTGAGGTTGT 1094
                                         745 GAGTAATGGAATCCATGCTTAAATCAGAAAGAGAACGATTATCCATTCAAAATTTTAGCA 804
                                                                                                                This clone (DKFZp31300816) is available at the RZFD in Berlin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Side()
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ullarity 99.9%; Pred. No. 1.5e 131;
Conservative 0; Mismedeber
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Max-Planck-Institute for Molecular Genetics
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/clone="MkFEp31300816"

/clone_lib="313 (synonym: hlec2)"

/dev_ssage="adult"
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Tel: 49-30-84131623
Fax: 49-30-84131128
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                        /lab_host-"DH108"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
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Eukaryeta, Metazea; Cherdata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Plimates; Catarrhini; Hominidae; Homo.
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                                                                                4441 GAACATCTATATTTCACCCCTGAAGASTCCATAIAAAA;ITGAGAAGATCTAGCAAGA 960
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 823)
NIH-MGC http://mer nri nih gov/
National institutes of Health, Mammalian Gene Collection (MGC)
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High quality sequence stop: 709.
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Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email raapbs remail sib grv
Iissue Procurement: DCID/DIP
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Location/Qualifiers

FEATURES

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/lab_host-"DH10B (T1 phage-resistant)"
//note-"Organ: prostate: Vector: phwR-LiB (Clontech);
//note-"Organ: prostate: Vector: phwR-LiB (Clontech);
//note-"Organ: prostate: Vector: phwR-LiB (ascatus);
//note-"Organ: Site_1: Sill (ascatus);
//note-"Organ: Sile_2: Sill (ascatus);
//note-"Organ: Sile_2: Sill (ascatus);
//note-"Organ: Sile_1: Sile_3: Si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (where B - A, C, or G and N - A, C, G, or 1). Average insert size 1.5 kb (range 0.9 4.0 kb), 14/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2529 AAAATO GGAGATOGAATTGTTFGGGTGATTGGTAAGCCACTFGAAATGTTAGTCATTGT 2588
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22.1%; Score 699.6; DB 12; Length 823;
Rest Local_Similarity 94.8%; Pred. No. 1.6e-126;
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/tissue_type="adenocarcinema"
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                                  /organism-"Homo sapiens"
                                                                          /db_xrel="taxon:9606"
/clone="IMAGE:4737634"
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Enkaryota: Motazou; Chordata; Craniata: Vertebrata; Euteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 76)
3006 AAAATITIGITITTAATTAAATAAAGCTGGAAGCAAAGTATAACCATATGATAGA 3065
                                                                                                                                                                                                                         602591312F1 NIH MON 77 HOMO Sapiens CONA Clone IMAGE:4717874 57,
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                  than Sequencing by: large Genomies, inc.

Clone distribution: MSC clone distribution information can be
louded through the LM.A.G.E. Consortium/LLNL at:
http://mage.llnl.grv
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National Institutes of Health, Wammalian Gene Collection (MGC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Famil: capabs remail.mih.gov
Tissue Procurement: CD-NTSTEL Jaboratories, Inc.
cibna Library Preparation: CLONTECH Laboratories, Inc.
cibna Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
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                                                                        1066 IAMTACTOAAACAGATTICATAMOTCAGAATGTAAAAGAAGT 3107
                                                                                          21.9%; Score 692.2; DB 12;
97.1%; Pred. No. 4.5e-125;
tive 0; Mismatches 18;
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High quality sequence stop: 726.
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/nole-"organ: brain: Vector: pCMVSPORT 6; 1st strand cDNA was primed with a Not1-oliqo(dT) primer. Five prime end enriched, double stranded cDNA was digested with Not 1 and
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                                                                        2609 TCTTGTGTAAATCCTGCCATTTAAAAAGTTGTAGCAGATTGTTTCCTTGTTCCAAAGTAAA 2668
                                                                                                                                               2669 ATTGCIGTGTTTAIGGAIAGIAAGAAGGCCCIGAGAGIGGGAGCCCTGAFAACCCAGGC 2728
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2549 TTTGGGTGATFCCTAAGCCACTTGAAATGTTAATTGTTATTATACAAGATFGAAAA 2608
                                                                                                                                                                  481 TCTTCCAAATGGAATTGGATTGACTGGCCCATTCACCAAAATTATCTTGAAACTCTTGC 540
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HP 191 91006 EVRY cedex France
Email: seqrefacenoscope.ens.tr, Web : WWW.genoscope.ens.tr.
                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 792)
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/lab_nost-"DH108"
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/elone=lib="LLL=NFL001_NBC4"
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cloued into the Not I and Eco RV sites of the pcWvSpokT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Receville Maryland 20850. USA Pax : (1) 301 610 8371 Email : Liliang #litetech.com URL : 26 315,ers
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93.6%; Pred No. 4.56-125;
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23; Mismatches
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Therefore (18th of Fire 2002)

HM466194 UST 05 PPG PRO SAPIENCE CONE IMAGE:5576939 51, MRNA Sequence.

5', mRNA BM466194

ACCESSION

N. C. N. A.E.

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RESULT 10 BM456394

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/clone="IMAGE:5576939"
/clone_lib="NiH_MGC_92"
/fissue_type="herbyonal carcinoma, cell line"
/lab_bost="DHIOH (phage-resistant)"
/note="Organ: testis: Vector: pCMV-SPORI6: Site_l: NotI:
Site_2: SalI: Cloned unidirectionally; oliqq-dT primed.
                                                                                                        Hukaryota; Mctarca, Chordata, Craniata; Vertebrata; Buteleostomi;
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                                                                                                                                                                                                                                                                                                             Tissue Frodurement: ATCC constituent Library Preparation: Life Technologies, Inc. constituenty Preparation: Life Technologies, Inc. constituenty Arrayed by: The I.W.A.C.E. Consortium (LIMI) DNA Sequencing by: Agencouft Bioscience Corporation Clore distribution. MCC clore distribution information can be found through the I.W.A.G.E. Consortium/LLNL at: http://maga.llbi.go.com/plate: LLAMI2329 row: j column. 12
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                                                                                                                                                                            MIN MAC ALLE, / Amar. mail. gov/.
National Institutes of Health, Mammalian Gene Collection (MAC)
Unpublished (1999)
Contact. Robert Strausberg, Fh.D.
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                                                                                                                              Mammalia: Eutheria: Primates; Catarrhini: Hominidae; Homo.
1 (bases 1 to 972)
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ADENCATRI_6402344 NHLMSL_72 HOMO SAPICES CONA CLORE IMAGE 5528B14
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//lab.host="DHTDM (phage-resistant)"
//note="nidan.skin.Vector:pGMV-SP:RT6.Site_1.Noil].
Site_2:salf.cloned unidirectionally.Primer:oligo dT.
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2785 TATTAATITATATGTATATTITTAATTITAAGAGAAAAGGTAAGAAAATGTGGTA 2844
                                                                                                                                                                                          2905 TOTANANATOGATATTATTAGAAATTAGAAAAATTAGTAATTATTATAATTTAGATTTT 2964
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                                                                                              2845 FOTATOTTOONAADESOAATITGALTGACTGGGCATTGAGCAAAALTATOOGGAGTCTTG 2904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             chNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Ageneourt Bioscience Corporation Clone distribution: MGC clone distribution information can be
                    601 TGCAAAAATGGATATTAFTANAAATTAGAAAAAAATTACTAATTTTACAATTTAGATTTT 660
                                                                                                                                                                                                                                                                                                                  NIH MGT bitp://mgcinci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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1 (bases 1 to 835)
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Best Laval Similarity 100.0%; Pred. No. 2.6e 122.
Marches 678; Conservative U. Mismatches 0; Indels
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Technologies."
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Tissue Produrement: ATCC/DGTD/DTP
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/clone-"IMAGE:5528814"
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Mammalia, Eutheria, Primates, Catarrhani, Homandae, Homo.
1. (bases 1 to 672)
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6033292330Fl NHEMST_90 Hates saplens cond clone iMade:5402622 57,
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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73 ICTIATTAAAGAAGGAAGGAGAAGGAGGAAGTGATGAATGTGTGTGT 132
                                                       found through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
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Email: cyapbs-r@mail.nih.gov
Tissue Procurement: AICC
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/note-"Organ: liver; Vector: pCNV'SPORT6, Site_1: Not!; Site_2: Sall, Cloned unidirectionally, oligo-dT primed Average insert Size 1.7 kb. Library enriched for tull-length clones and constructed by Life Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                        2527 AIAIIICACCCTGAAGAGIGGATAIAAAATTTGAGAAGGIGIGGGAAGAGGAAAAAA 2086
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Pred. No. 8.9e-119;
0; Mismatches 0, Indels 3
                                                        /Lissue type "adenocarcinoma, cell line"
/lab_host="DH10B (phage=resistant)"
                                                                                                                                                                                                                                                                                                                                                                  /clone="IMACE:5402622"
/clone=lib="NIH_MGC_90"
/db vref-"taxon:9606"
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94.98;
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BES 39.278 100-AUG-2000 mRNA linear EST 09-AUG-2000 601063567F1 NIH_MGC_10 Homo sapiens conv that that HMAGE.3449873 57,

BE539278.1 GI:9767923

mRNA sequence.

DEFINITION

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BF53427#

ACCESSION VERSION

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Znote-Torgan: cervix: Vector: pCMV-SPORT6: Site-1: Not1: Site-2: Sall, Cloned unidirectionally. Primer: Gingo dl. Avcrage insert size 1.5 kb. Library prepared by Life Technologies."
                                                      Eukaryola, Metazoar Chordatar Craniatar Vertebratar Enteleostomi;
Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
1 (bases 1 to 797)
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                                                                                                                                                                                                                                                                                         DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: Ms? chone distribution: Ms? chone distribution information can be found through the L.M A G E. Consortium/LLNI at:
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National institutes of Health, Mammalian Gene Collection (MGC)
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/cell_line-"MGC36"
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E04544717F2 NIH_MGC_61 Homo sapiens china clone iMage:4775332 5',
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(where B - A, C, or G and N - A, C, G, or T). Average
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                                    2.55 GYAGAAA EGAATGATAGATAGGITAAGAAGAAGAAA GAAA IGAGA FCTCAGGA 2411
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Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at.
479 GAGLECTAAATTTCAGCAGAAAGTGGCAGAAATGACTTGTAGTGGGAAGGGGAATGGAAAA 538
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Pred. No. 2.7e-115;
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Contact: Robert Strausberg, Ph.D.
Email: cqapbs r Mmil.nih.qov
Tissue Procurement: ATCC
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J., Blistan, R., Schmitt, A., Theising, B., Riller, E., Ronko, L., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsaqaretshvili, E., Williams, T., Jackson, Y., and Bowers, Y.
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Melton, D., Brown, J...
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Size selected an adarcse qual Average insert size 1kb. 5' Mind site was destroyed after directional cloning.

Amplified once. Contact information Hiroshi Inoue, MD. Metabolism Div. (Alan Permutt Lab), Washington University School of Medicine, Box 8127, 660 South Euclid Ave., St. Louis, MO 63110, E-mail: hinoue@immgate.wustl.edu, Tel: 314-56-1915, Exx: 314-7477.2692."
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                    Library was constructed by Dr. Hiroshi Inoue DNA sequencing by: Washington University ecome Sequencing Center For Intermalian an obtaining a clone please contact: Dr. Hiroshi Inoue
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/db_xrel-"taxon:9606"
/clone_lib-"HR85 islet"
                                                                                                                       Email: dmelton@biohp.harvard.edu
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High quality sequence stop: 426.
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.. Db 17 GATATTATTAGAAATTA 1
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Seatch completed: January 18, 2003, 04:10:13 Job time : 2798.89 secs

Gentlore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

nucleic search, using trame_plus_p2n model M protein

(without alignments) 7320.587 Million cell updates/sec January 17, 2003, 18:27:24; Search time 1763.22 Seconds

...TPMQKQKMNDSWLTSNKEEK 797 1 MPPKTPRKTAATAAAAAEP. US 09 026 459A 45 Perfect score: Sequence:

7.0 Xqapop 10.0, Xqapoyt Yqapop 10.0, Yqapoxt Equpop 6.0, Eqapoxt Delop 6.0, Delext HLOSUM62 Scoring table:

16154066 seqs, 8097743376 residues Searched:

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

No. Score March Length DB ID	
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	5', mkNA sequence.
ACCESS ION	HMS61083
VERSION	BM561083.1 G1:18806043
KEYWORDS	EST.
SOURCE	human .
ORGANISM	Homo sapiens
	Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
	Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
REFERENCE	1 (bases 1 to 1051)
AUTHORS	NIH-MGC http://mgc.nci.nih.gov/.
TITLE	National Institutes of Health, Mammalian Gene Collection (MGC)

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                                                                                           cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Avercourt BioScience Corporation (Clone distribution: MGC clone distribution information can be found through the "M A C "Consortium, I.M." at:
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lissue Procurement: ATCC
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Eukaryota; Metazoa: Chordata; Graniata; Verfebrata; Euteleostomi;
Mammalia; Eutheria; Frimates; Catarrhini; Hominidae; Homo.
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482 ProLysLysLysGlySerThrThrArqValAssSefThrAlaAsnAlaGluThrGlnAla 501
                                                                                                                                 522 LysValTyrArgLeuAlaTyrLeuArgLeuAsnThrLeuCysGluArgLeuLeuSerGiu 541
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Tissue Procurement: ATCC
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Poustka,A., Wellenfeuther,K., Mewes.H.W., Weil.H. and Wiemann,S.).
EST (Poustka,A., Wellenfeuther,K., Mewes,H.W., Weil.H. and Wiemann
                  Eukaryola, Metazoa: Chordala: Craniala; Verlekrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarthini; Hominidae; Homo.
1 (bases 1 to 727)
                                                                                                                                                                                                                                                                                                                                                                            Heidelberg/Germany) within the CDNA sequencing consortium of the
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/dev_staqe-"adult"
/lab_host-"bHt0H"
/lab_host-"betorppripHEX2; Site_l: SFilA: Site_2: SFilH;
                                                                                                                                                                                                                                                                                                                                                                                                                             This clone (DKPZp31300816) is available at the KZPD to Berlin. Please contact the RZFD: Ressourcenzentrum, Henbureweq 6, 14059-Berlin-Charlottenburg, GERMANY; Email: clone-tzpd.de.
                                                                                                                                                                                                                                                                                                            Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann.4dx12 heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
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Max-Planck-institute for Molecular Geneties
                                                                                                                                                                                                                                                                                                sequence of the clone insert
                                                                                                                                                                                                                                                                           Email: poustka@mpimg-berlin dahlem.mpq.de
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Mismatches:
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AR011246 HFF 19-10N-2002 MAS musculus 10 days embryo whole body CDNA, RIKEN 1ull-length enriched library, clone-2600012M22-re-inoblas-oma 1, Full insert
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Arakawa.T., Hara.A., Fukunishi Y., Konno H., Adachi.T., Fukuda.S.,
Aizawa.K., Izawa.M., Nishi.K., Kiyosawa.H., Kondo,S., Yamanaka.I.,
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Saito,T., Okazaki,Y., Gojobori,T., Bono,H., Kasukawa,T., Saito,R., Kadota,K., Matsuda,H., Ashburner,M., Butalov,S., Casavant,T., Fleischmann,W., Gasterland,T., Gissi,C., King,B., Nochiwa,H., Kuchl,F., Gasterland,T., Gissi,C., King,B., Nochiwa,H., Quackenbush,J., Schriml,L.M., Staubl,F., Suzuki,R., Tomita,M., Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H., Baldarelli,R., Barsh,G., Blake,J., Boltielli,D., Bojunga,N., Carninci,P., de Boraldo,M.F., Brownstein,M.J., Bull,C., Hill,B., Fletcher,C., Fujita,M., Gariboldi,M., Gustincich,S., Hill,B., Marchionni,L., Mashima,J., Mazzarcili,J., Mombaetts,P., Nordone,P., Ping,B. Phinwald,M. Podrince,L., Sakamoto,N., Sasaki,H., Saho,K., Saho,K., Saya,T., Shiba,a,Y., Sterch,K.F., Steuki,H., Toyo-oka,K., Wangay,K.H., Weitz,C., Whittaker,C., Wilming,L., Wynshaw,Bulis,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
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Adachi, J., Alzawa, K., Akahira, S., Akhmura, T., Aono, H., Arai, A.,
Arakwa, F., Haldarelli, R., Bono, H., Fromstein, M., Hall, C.,
Carninci, P., Eukuda, S., Fukunishi, Y., Furuno, M., Hanaqaki, T.,
Hara, A., Hayatsu, M., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F.,
Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T.,
Kato, H., Kawai, J., Kojima, Y., Konico, H., Kouda, M., Koya, S.,
Kato, H., Kawai, J., Kojima, Y., Konico, H., Kouda, M., Koya, S.,
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Numaraki,R. Ohno,M. Okazaki,Y. Orlo,T. Oras,C. Quarechbus
Sailo,B. Sailo,F. Sakai,C. Sakai,E., Sano,B. Sasaki,D.,
Schrimt,L., Shibata,K., Shibata,Y., Shinaqawa,A., Shiraki,T.,
Foqabo,Y. Suruki,B. Tajami,M. Taqawa,A., Takahashi,F.,
Fanaka,T. Teinha,Y., Toya,T., Yamamura,T., Yamanaka,I.,
Yasunishi,A., Yoshida,K., Yoshino,M., Muramatsu,M. and
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Nature 409 (6821), 685-690 (2001)
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
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793 TGTGTAGTTGACTATITTATIAAGTTCLCACGCCTGGACTACTCACACACACACAAAAA 852
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                                        111 ---AlaVall1eProlleAsnGlySerProArdThrProArdArdGlyGluAsnArqSer 129
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Tissue Procurement: ATCC/DCID/DTP
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Avetade insett size 2 kb. Librar; constructed by Lite
Technologies."
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Clone distribution. MGC clone distribution information can be
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Location/Outlifiers
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Tissue Procurement: ATCC/DCID/DIP
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/db_xref-"taxon:9606"
/clone "IMAGE:5528037"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
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Gersel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
Schellenberg, K., Steptoe, M., Tan, P., Underwood, K., Moore, B.,
Therstiq, H., Wylie, L., Lennon, G., Soares, H., Wilson, R., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gland tissue from a lactating temale, and was then primed with a Not I - oligo(dT) primer. Double-stranded cDNA was
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel@OStomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        vw54a04.rl Soares mammary_qland_NMLMG Mus museqlus clun clone
IMAGE:1247598 5' similar to qb:M15400 RETINORLASIOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
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702 ValseriletlydluSerPhedlyThrSerGluLysPhedlnLysIleAsnGluMetVal 721
                                                                                                                                                                       122 CysAsinSetAspArqVallout.ysArgSetAlaGluGlySerAsiiProProLysProLou 741
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4444 Forest Park Parkway, Box 8501, St. Louis, MG 63108
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/Tissue Type-"mammary gland"
/Tab_host-"DH10H"
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Contact: Marra M/Mouse EST Project.
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Zelone-"IMAGE:1247598"
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was constructed by Bento Soares and M. Fatima Honaldo.
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/note—forgan: Drain: Vector: pCMVSPOR! 6; lst strang cDNA was primed with a Not1-olgo(dT) primer. Five prime end enriched, double-stranded cDNA was disested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPOR! 6 Vector. Library was normalized. Library was constructed by life lechnologies. Contact: Pend Liang Library and division of Invitrogen 9800 Medical Center Drive Pereville, Maryland 20850, USA Fax: (1) 801-610
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Eukaiyota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                    301 GTTAGGACTGTTATGAACACTATGCAACAATTAATGALGALITTAAALTCAGGAAGLGAT 360
                                                                                                                                                                                                                                                   284 HoteuLysArgValLysArpile51yTyrIloPhoLysGluLysPhoAlaLysAlaVal 303
                                                                                                                                                                                                                                                                           Mammalia, Eutheria, Primates, Catarrhin; Hominidae, Homo. 1 (bases 1 to 792)
LLW.B., Gruber,C., Jessee,J. and Polayes,D.
Full-length CDNA libraries and normalization
Unpublished (2001)
Contact: Genoscope
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http://lulllength.invitrogen.com"
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This is the 5' sequence of the clone insert.
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DMET). Email s. Wiemann-84kf. heideiberg.dc.
sequenced by BMEZ (Biomedical Research Center at the Charite,
Herlin/Germany) Within the CDNA sequencing consertium of the German
                                                                                                                                                EST 14-AUG-2001
                                                                                                                                                                                                                                                                                                            Enkaryeta; Mertazea, Chendata, Craniata, Vertebrata, Euteleostomi; Mammala, Eutheria, Definatos; Catarrhipi, Hominidae; Homo (1) (bases 1 to 605) Koehrer,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S. (STR (Koehrer,K., Beyer,A., Mewes,H.W., Weil,B. and Wiemann,S.) Contact: Koehrer K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note "Vector: pTriplEx2, Site_1, SfiIA, Site_2, SfiIB, cDNA-collection"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This clone (DKF2p313F092) is available at the R2F5 in Berlin. Please contact the R2F9. Ressourcencentum, Heubnerweg 6, 14059 Herlin-Charlottenburg, GFPMANY; Email: clonearzpd de Location/Qualifiers
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BECREVAGE 119200 014 COK HYDEA2 HOMO SAPIONS CDNA, MKNA SEQUENCE. HOOBZ846
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                                                                                                                                                                       13) ArqiloAlatySChicoCluAshAspThrArqileHeGluValtouCystysGluRis 150
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                                                                                                                                                                                                                                               7.25 CHAWLACTARAAYTAGAAALIGALACAAGAATLATTGAAGLICTGTAAAGAACAT 656
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Eukaryota, Motazoa, Chordata, Graniata, Vertebrata, Buteleostomi,

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Mammalia; Eutheria; Primates; Catarrhin; Hominidae; Homo.
1 (bases 1 to 694)
Dias Neto,E., Garcia Correa,E., Verjovski Alme,da,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Hordin,S., Costa,F.F., Ragai,M.A., de Silva,W. Jr., Kaskuma,A., Baid,G.S., Simpson,D.H., Brunstein,A., deGliveira,P.S., Hucher,P., Jongeteck,C.V., o'Hare,M.J., Soares,F., Hrentani,R.K., Reis,L.F., de Sonza,S.J. and
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Chip://www.lodwig.org.br/corripts/detbind2.plv:1 atz BC2 BFOC4z 210
200 9th codar-zono oz 25t4-1)
Seq primer: pur 18 forward
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                                                                                                                                                                                                                                                                                                                                Shotgun sequencing of the human transcriptome with oRF expressed
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Laboratory of Cancer Genetics
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Melton, D., Merdows, A., Cliffon, S., Hillier, E., Marra, M., Pape, D.,
Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter
Wylie, T., Martin, J., Brinett, J., Cardenas, M., Gibbons, M., McCann, R., Cole
, K., Isaqareishvil, R., Williams, T., Jackson, Y. and Bowers, Y.
Washu-Harvard Panereas ESI Project
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or intormation on obtaining a clone please contact; Juliana Brown
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Eukaryota: Moracos: Chordata: Craniata: Vortebrata; Euteleostomi;
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Dept of Molecular and Cellular Riology, 7 Nivinity Avc. Combridge
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IMAN3E:5638049 5' similar to qb:MI5400 RETINORLASTOMA-ASSOCIATED
PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma susceptibility
                   415 Met IleLysHisLeuGluArqCysGluHisArgIleMetGluSerLeuAlaTrpLeuSer 434
                                                                                                                                                                                                                                                                                                                         15 LeuAspScr6lyPhrAspLeuSerPhoPreIrpHeteuAsaValleuAsaLeuJsAla 394
                                                                                 95 PheAspFheTyrLysVallleGiuSerFheIleLysAluGluGlyAsnLeuThrArqGlu 414
                                                                                                  197 GATTCANSCITTATITGATCTTATTAAACAATCAAAGGACCGAGAACAACTGATCAC 138
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1 others
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1 (bases 1 to 871)
Martaim, Hillier), Allen,M., Howles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,L., Lacy,M., Lo,M., Martin,J., Morris,M.,
Schellenberg,K., Steptor,M., Han,F., Underwood,K., Monre,R.,
Theising,K., Wylie,I., Lennon,G., Soares,B., Wilson,R. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Author—"Vector: pT71%D-Pac (Pharmacia) with a modified polylinker: 1st. Strand cDNA was prepared from manmary qland tissue from a lactating female, and was then primed with a Not 1 - oligo(dl) primer. Nouble-stranded cDNA was
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Mammalia: Butheria: Rodentia: Sciuroquathi; Muridae: Murinae: Mus
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                                                                                                                                                                                                                                                                                                                                                                                        Email: monscostawatson.wustl.edu
Dis clone is available royalty-tree through DLML; contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                            IMAGE Consortium (intofimage, lln1.gov) for further information.
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/cloup-"IMAGE:1247665"
/sex="female (lactating)"
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo,
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National Institutes of Health. Mammalian Gene Follection (MGC)
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564 GIGIGATGANATCCATGCTTAAATCAGAAGAAGATTIGIGGATIGAGATTITAGIA 505
                                     384 rotrp11et.cuAsnValLeuAsnLeuLysAlaPheAspPheTyrt.ysVallTeV1uSerP 404
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/lissue_type="ademocarcinoma, cell line"
/lab_host-"bHl06 (phage resistant)"
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/db_xref="taxon:9606"
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Tissue Procurement: Afcc
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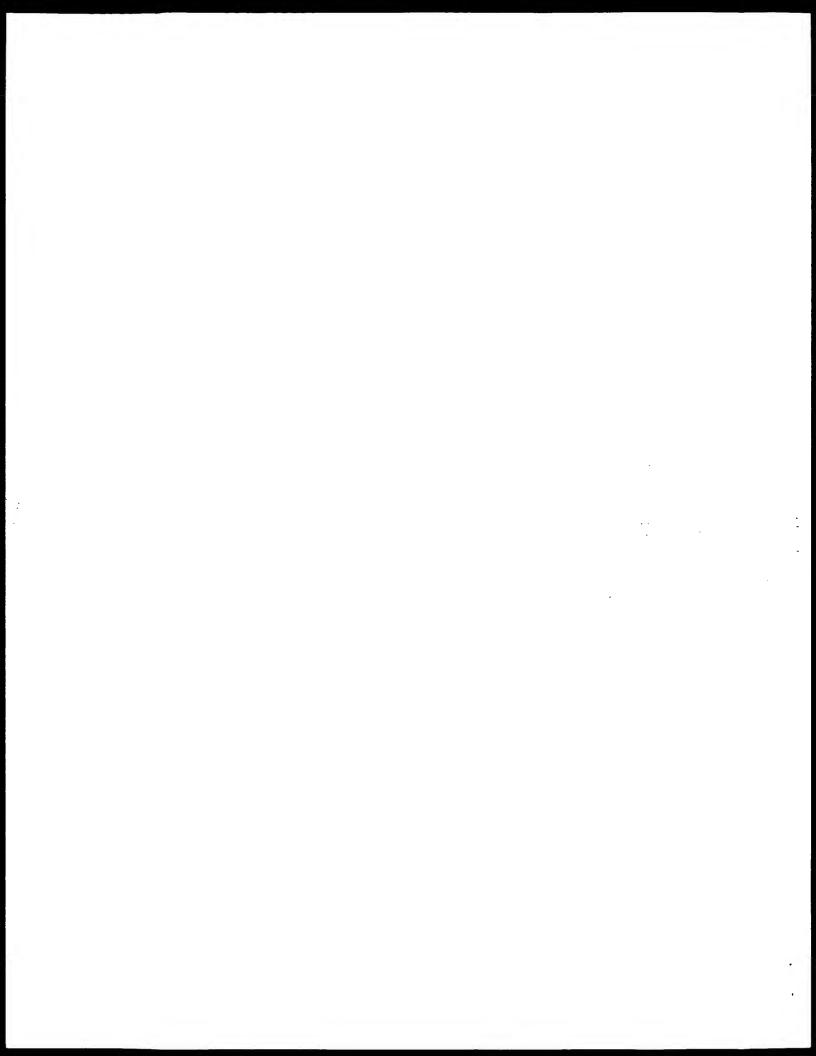
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High quality sequence stop: 559.
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Fax: +55-11-2707001
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Site_2: Sall; Cloned unidirectionally, oligo dT primed. Average hisert size 1.7 kb library enriched for full-length clones and constructed by Life Technologies. Note: this is a NH_MGC Library."
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//ole="Ordan.head_mesk, Vertor.purl8, site_1, smal; Site_2: Smal A mini-library was made by closing products derived from ORESTES PCR (U.S. Letters Patient application No. 196,716 - Ludwig Institute for Cancer Research profiles into the pCC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions.
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HGCP http://www.ludwiq.org.br/OPESTES.
The FAPESP/LICR Human Cancer Genome Project.
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/db_xref-"taxon:9606"
/cione_lib_"HT0181"
/dcv_stage-"Adult"
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BILST968 1745 DECEMBER 1995-30L-2001 0.02916108FI NCL_CGAP_LG29 MAS MASCALAS CDNA CLOAE IMAGE.5066737 5',
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                                                                                                                                          Email: eqapbs-r*mail.nih.gov
Tissue procurement: Gilbort Smith, Ph.D.
FONA Library Ereparation: Lite Technologies, Inc.
FONA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
INA Sequencial by: Incyte Annaise, Inc.
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
                                                                               591 stletteValThrAlaTyrtysAspicuProHisAlaVaiGinGluThrPheLysArgVa 611
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Contact: Robert Strausberg, Ph.D.
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                                                              607 ThrPheLysArqValLeuIleLysGluGluGluTyrAspSerIleHeValPhcTyrAsn 626
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GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Etd.

nucleic search, using trame_plus_p2n model m protein

January 12, 2003, 18:27:24 : Search time 1882,69 Seconds (without alignments) 7320,587 Million cell updates/sec

Litle: Perfect score:

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Total number of hits satistying chosen parameters:

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Shibata,K., Itoh,M., Aizawa,K., Nagaoka,S., Sasaki,N., Carninci,F., Sono,H., Akiyama,J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishi,Y., Nakamura,S., Harama,M., Nishine,I., Harada,A., Yamamari,F., Maisumeri,H., Sakaguchi,S., Ikegami,T., Fashiwaqi,E., Pujiwake,S., Inoue,K., Toqawa,Y., Izawa,M., Ohara,E., Watahiki,M., Orazaki,Y., Natamarisu,M., Inoue,Y., Kira,A. and Haysshizaki,Y. RIKIN integrated sequence analysis (RISA) system--384-format seconding pipeline with 384 multicapillary sequencer second 20530913
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Troh,M., Konno,H., Okaraki,Y., Maramaism,M. and Bayashizaki,Y.
Normalization and subtraction of cap-trapper selected cDNAs to
prepare full-length coNA libraries for rapid discovery of new g
Genome Res. 10 (10), 1617-1630 (2000)
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clone_lib:PIKEN full-length enriched mouse cDNA library
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Taboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
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                                                                                                                                                                                                                                                                                     293 TGTGTAGTTGACTATTTTATTAAGTTCTCACTTGCTGCACTACAGGAGGGCATACAAA 852
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Contact: Robert Strausberg, Ph.D.
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EST (Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                         177 qArgClyClnAsnArqSctAlaArgllcAlaLysClnLcuCluAsnAspthrAcqtlett 197
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Note: this is a NIH_MOC_Library."
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                                    cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourf Bioscience Corporation Thous distribution: MGC clone distribution information can be bound through the LiM.A.G.E. Consortium/LLNL at:
                                                                           784 FLAFCAFTCAAAATLIFAGAAACTTCTGAAFGAGGATTTTFTGAFAFGTGTTTTTT 842
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724 CESSAGITOSCITGIAITACGANGTAALGAATCCATGCITAAATCAGAAAAAGAGA 782
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      No st sequence available.
This clone (PEFE STREEFL) is available at the ECFD in Berlin.
Please contact the R2PD: Ressourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERMANY; Email: clonewrzpd.de.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Tissue Procurement: APCC
cDNA Library Preparation. Life Technologies, Inc.
CDNA Library Arrayed The I.M.A.G.E. Consortium (LLNL)
DNA Sequenciad py. Agendout Bioskience Corporation
Clone distribution: MGC clone distribution Information can be
                                                                                                                                                786_A). #31071; Set Asc Printing From the List of Standard Lad. #31. Set 1805 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 | 1111 |
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NEH MGC http://mgc net alb geve.
National Institutes of Health, Mammalian Gene Collection (MGC)
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Plate: iLAM13279 row: i column: 20
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Contact: Robert Strausberg, Ph.D.
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AGENU-JIKI 540.2743 NIH_M3C_72 Homo Sapiens cDNA Clone IMAGE:55.28B14
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NIH MGC http://mac.nci.nih.qov/.
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Email: eqapbs ramail.nih.gov Fissue Procurement: ATCC/DCTD/DTP

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/lissue_type "mclanotic mclanoma"
//db_host="DH10W (phage resistant)"
//note="Organ: Skin; Westor: pCMV SPORTS; Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oliqo dT
Average issert size 2 kb. Library constructed by Lile
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cDNA Library Freparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortion (LLNL) DNA Sequencing by: Appendent throseience comporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortion/LLNL at:
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/clone_lib="NIH_MGC_72"
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//clone=Infage:Triber."
//issue=Iype="melanotic melanoma"
//lab_host="DH10B (phage=resistant)"
//lab_host="DH10B (phage=resistant)"
//note "Organ: skin. Vector: pCMV-SPORT6; Site_1: Not!;
//not. Vector: pCM
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Email: cgapbs-ramail.nih.gov
lissue Procurement: ATCC/DCTD/DTP
close Procurement: ATCC/DCTD/DTP
close Library Preparation: Lite Technologies, Inc.
cDNA Library Arayed by: The LiM.A.G.E. Consortium (LLNL)
DNA Sequencing by: Anancourt Rioscience Corporation
clone distribution: MGC clone distribution information con be
found through the LM.A.G.E. Consortium/LLNL, at:
http://imago.llnl.gov
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/clone="IMAGE:5528037"
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EST 27-3AN-1998
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Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, H.,
Theising, B., Wylie, T., Lennon, G., Soares, R., Wilson, R., and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota, Metazoa: Chordata: Craniata: Vertebrata. Euteleostomi:
Mammalia: Eutheria: Rodentia, Scierognathi: Muridae: Murinae: Mus.
1. (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vw54a04.rl Soares_mammary_gland_NMLMG Mus musculus cDNA cloue
IMAGE:i247598 5' similar to qb:MI5400 RETINOBEASTOMA-ASSOCIATED
PROTEIN (HUMAN): gb:M26391 Mouse retinoblastoma susceptibility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This clone is available royalty-free through LLML; contact the IMAGE Consortium (info@lmage.llml.gov) for further information.
                                                                  676 HeValPheTyrasnSerValPheMetGUnArgLeuLysThrAsnHeLeucHnTyrAla 695
                                                                                                                                                                696 SerThrArgProProThrLeuSerProlleProHislleProArgSerProTyrLysPhe 715
                                                                                                                                                                                                                                                                                                                                                                                         122 AIAGIAITCIAIAACICGGICIICAIGCAGAGATGAAAAAAAAIAIIIIG AGIATGCI 181
                                                                                                                                                                                                              182 TICCACCAGGCCCCTACCTTGTCACCAATACCTCACATTICTCGGAAGCCTTACAAGTTT 241
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736 TyriysileSerGluGlykeuProThriysMetThrProAigSerArglleteu
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Washington University School of MedicineP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Marra M/Mouse EST Project
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein (MOUSE);, mRNA sequence.
                                                                                              AA763411.1 GI:2813158
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Fax: 314 286 1810
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High quality sequence stop: 422.

+56 HisAiaValGlnGluThrPheLysArgValLeuIleLysGluGluGluTyrAspSerIle 675

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polylinker: 1st strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not 1 - oligo(dl) primer. Double-Stranded CDNA was
                                                                                                                                                                                                                                                                 ligated to Eco Ki adaptors (Pharmacia), digested with Not in and closed into the Not I and Eco Ki sites of the modified pTT1s vector. Library is normalized. Library was constructed by Bento Soares and M. Patima Bonaldo."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone lib="Soarcs_mammary_gland_NMLMG"
/sex="female (lactating)"
/tissue type="mammary gland"
/lab_bost="DHLGB"
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                                       /ordanism."Mus musculus"
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                                                                              Zelone-"IMAGE:1247598"
                                                          /db_xret-"taxon:10090"
Location/Qualitiers
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82,14%
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Zhoke-"organ, brain, Vertor, pcMVSPokT 6, ist strand obna was primed with a Noll'oldydo(dT) primer. Five prime end enriched, double-stranded cDNA was dispessed with Noll and cloned into the Not I and Eco RV Sites of the pcMVSPORT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by Life Technologies. Contact: Feng Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive Rockville, Maryland 20850, USA Fax: (1) 90 610
8371 Email: illangelitetech.com URL:
http://tullength.invitrogen.com"
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Eukaryota; Metazoa; Chordata; Craniata: Vertebrata: Euteleostomi:
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                                                                                                                                                  479 ArqlleMetGluSerLeuAlaIrpLeuSerAspSerProteuPheAspi.eulleLysGln 498
                  539 tysglyserthrihrargvalAsnserthrAlaAsnAlaGlothrothAlathrserAla 558
                                                                                                                                                                                                                                                                Genoscope - Centie National de Sequencaqe
BP 191-91006 EVRY cedex - France
Email: seqref/qenoscope.cns.fr, Web : www.genoscope.cns.fr.
                                                                           499 SerLysAspArgGluGlyProThrAspHisLouGluSerAlaCysProLeuAshLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Full-length cDNA libraries and normalization unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="neuroblastoma_cells"
/lab_bost="DH10H"
                                                                                                                                                                                                                                                                                                                                                                                                                               N H H
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Mismatches:
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/clone-"CSODE007xnos"
/clone_lib-"LTI_NFL001_NBC4"
/sex-"male"
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163 LysThrAlaValIleProlleAsnGlySerProArqThrProArqArqGlyGlnAsnArq 182
                 SetAlaArglleAlaLysGlnLeuGluAsnAsp?hrArgllelleGlnValfeuCysLys 202
                                                                                     731 AGTIGCACGGWTAGCAACACAAYTAGAAATTGATACAAGAATTATTGAAGTTCTCTGTAAA 672
                                                                                                                  203 GlodfsGluCysAsnileAspaloValitysAsnValTyrthcLysAsnRhelleProPhe 222
                                                                                                                                  223 Mei AsmSerLeuGlyLeuValThrSerAsmGlyLeuProGluVilGluAsmLeuSerLys 242
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471 GACAYIWTCCAACAATAAAGATGITTITAAATICAGCAAGTGITCAACCITCAGAAAT 312
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Unpublished (1999)
Contact: Koehrer K
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Am Kloplerspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Seroma Analysis, German Cancer
Research Center (DKEZ): Email s. Wiemannfakfz- heidelberg.do;
Sequenced by BMFZ (Biomedical Research Center at the Charlie,
Berlin/Germany) Within the cDNA sequencing consortium of the German
                                                                                                                     No sl sequence available.
This clone (DKF7p3130692) is available at the KZPD in Berlin.
Please contact the KZPD: Ressourcenfontrum, Heabherwey 6, 14059
Berlin-Charlottenburg, GERMANY: Email: clonedrippide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          238 GluAsnLeuSerLysArqTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArq 257
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/note-"ordan breast: Vector: purl8; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from okeSTES PCR (U.S. Letters Patent application No. 196 into the purl listing to Cancer Research) profiles into the purl B vector. Reverse transcription of tissue mana and cDNA amplification were performed under low stringery conditions."
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(Attp://www.ledwir.ca.lt/s/ripas/gw/him), plot.atz-PV2 RIOA42 110
200 014 e06at8-2000-02-21at4-1)
                                                                                                                                                                                               EST 12-JUN-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: asimpson-dindwiq.org.br
This sequence was derived from the PAPESD/LCV Human Caneer Genome
                                                                                                                                                                                          BEOB1846
RC2 BT0642 210200-014 e06 BT0642 Homo sapieus cDNA, mRNA sequence.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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541 OSAGIAALGSAAGCATGCITAAALCAGAAGAAGGATBAFCATGGAAATTTTAGC 600
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Laboratory of Cancer Genetics
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Melton, D., Meddows, A., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylle, T., Martis, J., Blistain, A., Schmitt, A., Theisina, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsaqareishvili, R., Williams, T., Jackson, Y., and Bowers, Y.
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Harvard University, Howard Hadbes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave. Cambridge,
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DNA sequencing by: Washington University Genome Sequencing Center
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iallb09.yl Human Panerreit Estes Homo sapiens cDNA clone
IMAGE:56.8649 5' similar to db.M15400 RETINOBLASTOMA ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibility
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349 PhetysClutysPheAlatysAlaValUTyGlmAlyCysValGlutteGTySerAlnArd
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this sequence now available from the IMAGE consortium, for clone
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[ (bases | to 871) Marra, M. Howles, M., Dietrich, N., Dubuque, I., Marra, M., Hillier, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, I., Scist, S., Kucuba, T., Lacy, M., Martin, J., Morris, M., Schlenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, R., Theising, B., Wylie, I., Lennon, G., Soares, B., Wilsen, R. and Waterston, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Anche-Vector. pT713D-Pac (Pharmacia) with a modified polylinker: 1st strand cFNA was prepared from mammary quand tissue from a lactating female, and was then primed with a Not 1 - 011go(dT) primer. Double-stranded chan was ligated to Ecc RI adaptors (Pharmacia), disested with Not I and cloned into the Not I and Ecc RI sites of the meditied pT713 vector. Library is normalized. Library was constructed by Hento Soarcs and M. Fatima Honaldo. "
                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metasoa, Chordata, Craniata, Veitrhrata, Enteleosiomi;
Mammalia: Eutheria: Rodentia; Sciuroquathi: Muridae; Musimae: Mus
                                                                                                                                                     vw54h01.rl Soarcs_maxmary_gland_NM.MG Mus musCulus cDNA clone
IMAGE:1247665 5' similar to gb:M15400 RETINOHLASTCMA ASSOCIATED
PEPTETM (HCMAN), gb.M26391 Mouse relincblastoma subceptibility
protein (MOUSE):, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This clone is available royalty-free through LLML, , contact the IMAGE Consortium (infowimage lind gov) for further information.
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WashOrlmin Mouse EST Project
Washington University School of Medicinep
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
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/sex="female (lactating)"
/Lissue_type="mammary qland"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: mouseest *watson.wustl.edu
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National Institutes of Bealth, Mammalian Gene Collection (MGC)
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/lab_host-"DHIOB (phage-resistant)"
//uote-"organ: liver; Vertor: phagestart; Site_1: Not1:
Site_2: Sali: Clound uniditectionally; olide dl primed.
Average insert size 1.7 kb. Elimary enriched for full-fength clones and constructed by Life Lechnologies.
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                                                                        tound through the I.M.A.G.E. Consortium/ILML at:
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- 84] AspScrMctAspThrScrAsnLysGluGluLys 851 Š
 - 716 GGAAGGTGGGTACCTCCACACAGGGAAAGAAAG 748

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1 GGGGTGATGCCGGGCAAAAC.....AAATGAGGATTATTGATAGT 3461 Perfect Score: Sequence:

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Total number of hits satisfying chosen parameters:

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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## SUMMARIES

|   |        | Description        | <br>HM450031 AGENCOURT | BM561083 AGENCOURT | BQ439221 AGENCOURT | HQ220275 AGENCOURT | AKC11246 Mus museu | HM475603 ACHNCOURT |
|---|--------|--------------------|------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|   |        | ==                 | <br>1023 13 BM450031   | BM561084           | BQ4 39221          | RQ220275           | AK011246           | BM475603           |
|   |        | Ŧ                  | ~                      | Ĩ                  | 7                  | 7                  | -:                 | -                  |
|   |        | Match Length DB 1D | <br>1023               | 1051               | 1081               | 88.1               | 1.44,4             | 1001               |
| æ | Ourry  | Match              | 26.3                   | 26. 4              | 24.7               | 74.4               | 30<br>71<br>71     | 22.7               |
|   |        | Sec. 10            | 910.2                  | 406.4              | 85.6               | 844.8              | 7.80               | 786                |
|   | Result | ž                  | -                      | ~                  | -                  | 4                  | <u>.</u> -         | ď.                 |

iocation/Qualifiers 1. 1023

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FEATURES

| HMS458B1 AGEN/CORT<br>ALS92B11 DKEXP\$130<br>5. CORTANDARD | BGA10661 602611848 | ALS43157 ALS63757 | HO 1974 OF COLD FIRST<br>HM456194 AGENCOURT |            |      | BE549278 601064567 | BG616219 662644717 |      |      | AWSB 3181 iallh09.y | ALS99633 DKFZp313P | 183,253,44 6.0236,452,78 | AL599105 DKFZp313G | AA76:4411 vw54a04.1 | AW 46 8 2 44 CM 3 HT0 18 | AA763485 vw54h01.1 | AW182967 La08e98.9 | AL692790 DKFZp3141 | ALL20941 DKFZp762D | BE941246 MR0-HT015 | AV715544 AV715544 | BF144857 601790343 | B1151568 602916108 | AA258255 2159404.r |       |       |             |       | BM456728 AGENCOURT | B1526982 602927177 | RE944784 RC4 HT094 | A1093215 qb04a02.x | ALC98766 DKH2p313F | BE865749 601678131 | AI082179 0x75e04.x |
|------------------------------------------------------------|--------------------|-------------------|---------------------------------------------|------------|------|--------------------|--------------------|------|------|---------------------|--------------------|--------------------------|--------------------|---------------------|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------|-------|-------------|-------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 13 BM545881<br>9 A1597811                                  |                    | AL563757          | 12 BC355436<br>13 BM466194                  | 3 HM453724 |      |                    |                    |      |      | _                   | <                  | 12 BG253543              |                    | 9 AA76.1411         | 10 AW368244              | ⋖                  | 10 AW582967        |                    | <                  |                    |                   |                    | 13 BII51568        | <                  |       |       | 10 BE168095 |       |                    |                    | ~                  |                    | <                  | 12 HE865749        | A1082179           |
| _                                                          | 833                |                   |                                             |            |      |                    |                    |      |      |                     |                    | 775                      |                    |                     |                          |                    |                    | 5.59               |                    |                    |                   |                    | 746 1              |                    |       |       |             |       |                    |                    | _                  | 457 9              |                    |                    | 447 9              |
| 2005<br>2006                                               |                    | 야 5<br>유 5        |                                             | 19.6       | 19.1 | 18.6               | 18.6               | 17.8 | 17.7 | 17.5                | 17.5               | C 1<br>- 1               | 16.8               | 16.6                | 16.4                     | 16.1               | 15.3               | 15.3               | e                  | 14.9               | 14.8              | 14.8               | 14.6               | 14.3               | 14.1  |       |             |       |                    |                    |                    | 3.2                |                    | 13.1               | 12.9               |
| 752.4<br>725.4<br>725.4                                    | 699.6              | 698.2             | 691.8                                       | 678        | 660  | 641.6              | 642.2              | 617  | 614  | 605.2               | 605                | 4.96.                    | 580                | 575.2               | 566.4                    | 558                | G. 08.5            | 530                | 5.28               | 516.8              | 513.2             | 512.2              | 505.2              | 493.8              | 486.4 | 484.4 | 481.4       | 480.2 |                    | 474.4              | 459.2              | 457                | 457                | 454.2              | 447                |
| r so z                                                     | 10                 | ر<br>11 د         | <u> </u>                                    | 14         | 15   | 16                 | 17                 | c 18 |      | 20                  | 21                 | 01<br>01                 | 53                 | c 24                | 25                       | c 26               | 7.                 | 28                 | 53                 | 30                 | 7                 | ₹<br>*             | ~                  | 34                 | 35    | 94    | c 37        | æ .   | 5.6                | 40                 | 41                 | c 42               | 43                 | 44                 | ે <b>4</b> ડ       |

## ALIGNMENTS

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 BM450031 1023 bp mkNA linear ENT 05 FEB-200.
AGENCOURT_6393544 NIH_MGC_72 Homo Sapiens conA close LMAGE:5528037
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Sukaryoris, Metazoa, Chordata, Graniata, Vertebrata, Enfeleustomi,
Bammalia, Entheria, Primates, Catarrhini: Hominidae, Homo.
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1997)
Contact: Robort Strausborg, Ph.D.
Email: cgapbs-r*mail.nth.gov
Contact: Procurement: ArCACTDC/DF/PTP
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
 DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution intormation can be found through the L.M.A.G.E. Consortium/LANL at: Flate. LLAM12204 FGW. d col.m... 22
High quality sequence stop: 643.
 BM450031.1 GI:18499071
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/hore "Organ skin Vertor pGMV-SPORTG Site_1 Not1:
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average Lisert, size 2 kb. Library constructed by Life
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 2149 TOATGOTGITOAGGAGACATTCAAACGIGTITIGAICAAAGAAGAGAGAGIAITOTGI 2168
 2169 TATAGTALTGTALAAMTGGGTGTTGARGAGAGTGAAAAGAAATATTTGGAGTARGC 2228
 2229 TPCCACCAGGGGGGCCTAGCTTGTCAGCATACCTCACATTCCTGCAAGCCCTTACAAGTT 2288
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 2349 ATATAAAATTTGAGAAGGTPPGGPAAGAPPAAAAAGAGTGGAAGAPGAPGAPGTP 2408
 ATEM ACTALCAATEGOLGAATGATTGGGGAGTTGGGGAGGTTGGAGAAAATAAATGAGATGGT 2468
 2589 AGGAGAGICCAAATITICACAAAATICCACAAAATICACTITATIATICACTICAAATICA 2648
 2829 AAAATGTGGAATGGAATTGTTT - GAGTGATTGCTAAGSVACTGGAAATGTTAGTVATT JAAG
 181 FICCACCAGGCCCCCIACCIIGICACCAATACCICACAATICCIGGAAGCCTIACAAAGTT 240
 481 GAAAAAACTACGGTTTGATATTGAAGGATCAGATGAAGGAGGAGGAAGTAAAGTAAAAATGGAAGTAAAA
 66. GANGARI MANGARAN MENANGAN
 6; Gaps
 26.3%; Score 910.2; DB 13; Length 1023; 95.2%; Pred No. 7 16-168;
 0; Mismatches 43; Indels
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/Lissue_type "melanotic melanoma"
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 Average insert, size 2 kb.
/organism-"Homo sapiens"
/dp_xref-"tavon:9606"
 /clone "IMAGE:5528037"
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AGEN'D URI 5565133 NIH_MGC_67 HOMO Sapiens CDNA clone IMAGE:5550905
57, MRNA sequence.
 ionally, Primer: Oligo dl.
Library constructed by Life
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Eutheria, Primates, Catarrhini, Hominidae: Homo.
 2887 GTTATTTATAGAAGATTGAAAATGTTGTAAATGCTGCCATTTAAAAGTTGTACTGA 2946
 1207 AAA'S HEFFESTANASTESTSTSSAATTSSTSTSN'S NATAOAAN 11.538.17.38. 1266
 1327 AATTITAGCAAAÇTTÇTGAATGAÇAAÇAFTTTTĞALATĞTÇTTTTATTGGGGTGGGGCTCTT 1386
 841 GITATITATACCAGATIGAAAAICTIGIGIAAAICCIGCCAAITAAAAAGTIGTAGCAGA 900
 901 TESTITICATION CONTRABANTO TO TOTAL TO CALAGAAAA 1GGCCCCIA 960
 1267 PTGTATFAMMAAATAAFAAATMMATGGTTAAAFGAGAAGAAGAAGGAFGAFGAFGAAGAAGAA 1326
 61 TINIATIANGGAGIAATGGAATGGATAAATGAGAAGAAGAAGAAGAAGAAGAATAALGGAATGAA 120
 1 (bases 1 to 1051)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 Clone distribution: MGC clone distribution information can be
 /note="Ordan: eye; Vector: pCMV-SPORT6; Site_1: NotI;
 2; Caps
 1 ATAGOTOTOGGACAGGGTOTOGAAATTGGATCAGGGGATAGAAGTTGGAGTTGGC 60
 8003 AMANGAMATOTTAMIAAOTAMAGOISICIAMIINTIFAGOTTOTTAIAMI
 cDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consertion (LLNE) DNA Sequencing by: Agencourt Bioscience Corporation
 Score 909.4, DB 13, Longth 1051; Pred. No. 1e-167;
 13; Indels
 found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate. LLAM12263 row. m. column: 18
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Average insert size 1.75 kb. Library Technologies."
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/lab_hest "DH10B (phage.resistant)"_
 299 t
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 Email: cqapbs-r@mail.nih.qov
 High quality sequence stop: 7
Location/Qualifiers
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 98,48
 Unpublished (1999)
 0 1777
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Best Logal Similarity
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 human.
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BQ4 (922)
AGENCOHRT 7765562 NHLMGC_92 Homo Sapiens cDNA clone IMAGE:6015480
 Homo Sapiens
Enkaryota: Metazoa: Chordata: Craniata: Vertebrata; Euteleostomi;
Mammalla: Eutherla: Primates: Catarrhin: Hominidae: Homo.
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 447 TGGFTTTGCALGGATTCLGAATGLGCTFAATTTAAAAGCCTTTGATTTTTACAAAGTG 1506
 1507 ATCGAAAGITITTATCAAAGCAGAAGGAACTTGACAAGAGAAATGATAAAAGATTTAGAA 1566
 567 CGATGTGAACATGGATGGATGGATGGCTTGCATGGGTGTGAGATTGAGTTFACTITALTIGAT 1626
 1527 CHALIAACAALCAAAAAAAAAAAGACCAACIGARCACCIGAALCIGCITGECI 1686
 1887 CTTAATCTTGCTCTCGAGAATAATCACACTGCAGGAGATATGTATCTTTCTCCTGTAAGA 1746
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 .807 GCAAGOTCAGGCTTGCAGAGGCAAGGGATTGAAATGTAGGTGTGTTTTGAGTGTTTTTAT 1866
 1926 AAAAAAGTGTATCGGCTAGCCTAICICCGGCTAAATACACTTTGTGAACGCCTTCTGTGTCT
 1927 GAGCACCCAGAATTAGAACATATCATCTGGACCCIIIIGGAGGAGACACGCGGGAGAATGAG 1986
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 2047 TGCAAAGTGAAGAATATAGACTTAA -ATTCAAAATCATTGTAACGGATACAAGGATCT 2105
 181 GAGGTTGTAAFGGCCACAFATAGCAGAAGTACATCTCAGAATCTTGATTCTGGAACAGAT 240
 421 CTIATIAAASAASAASSACSSASAASSACSAACTGATCACCTTGAATCTSCTTGTCT 489
 121 AATILIAG'AAACIICIGAATGACAACALTITICAIAIGICTTIALIGGGGIGGGGTGTF 180
 NIH Mest http://wqc.nci.nih.qov/. National institutes of Health, Mammalian Gene follection (MGC) and London Line of Health, Mammalian Gene follection (MGC) \sim 10^{11} \, \rm Gene
 2106 TOTICATGCTGTTCAGGAGACATTCAAAGGTGT TTTGATCAAAGAAGAGGAG 2157
 Unpublished (1999)
Contact: Robert Stransberg, Ph.D.
Email: cqapbs-ramail.nih.gov
 HQ4 (922).1 01:21178297
 (bases 1 to 1081)
 57, m<mark>KNA</mark> sequence.
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/lab.host "DH10B (phage resistant)"
/note="organ: testis: Vector: pCMV SPORTS; Site_1: Not1;
Site_2: Sall; Cloned uniditectionally; oliqo df primed.
 Average insert size 2.5 kb. Library enriched for full length clones and constructed by Life Technologies. Note: this is a NH_MGG Library."
 7987
 2563 GAAGCAGATGGAAGTAAACATCTCCCAGGAGGTGTAAAALLTCAGTAGAAATLGGTAGAA 2622
 2683 AACAAGGAAGAAATGAGGATGTGAGGAGFTTGGTGGAGAGTGTGTAGAGGTFTGGATT 2742
 2743 CATTIGTOTOTOACAGATGTGTATAACTTTGGCAGGTTGTGTTTATGGCCACATTTA 2802
 8043 TGCCTTCTTLIGIAGCALAFAGGFGATGTTTGCTCTTTTTATTAAFTLALATAA 3102
 3163 TITGATIGACTGCCCATICACCAAAATTATCCTGAAGTCTTCTGCAAAAATGGATATTAT 3222
 2623 ATGACTICTACTEGAACACGAATGCAAAAGGAGAAAATGAAATGATAGCATGGATACCTCA 2682
 2482
 301 AAGCCACTTGAAATGTTAGTCATTGTTATTATAGAAATTGTTGTTGTAAAATCCTGTAAAATCC
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 61 ATGACTTICTACTGGAAGAGGAATGCAAAAGGAGAAAAHGAATAGATAGATAGGTGA 120
 1 GAAGCAGATGGAAGTAAAACATCTCCCAGGAGAGTCCGAAATTTCAGCAGAAACTGGCAGAAA 60
 Sapo
 2803 ATATCIICAGCICTTIIGIGGAIAIAAAA1GGCAGAIGCAATTGIITGGGGGAATTCCT
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 241 ATATCTTCAGGTCTTTTGTGGATATAAAALGTGCAGALGGAAFTGTLLGGGTGALLGCT
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 Ouery Match 24.7%; Score 856; DB 14; Longth 10B1; Best Local Similarity 99.1%; Pred. No. 2.8e-157;
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 Pred. No. 2.8e-157;
0, Mismatches 5;
http://image.llnl.gov
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 High quality sequence stop: 742.
 /clone-"IMAGE: 6015480"
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//onte_"Ordan testis: Vector pCMV-SPORT6; Site_l. Not1;
 Site_2: Sall; Cloned uniditectionally, elige off primed, Average insert size 2.5 kb. Hibrary enriched for full-length class and posstructed by life behallegies. Note: this is a NHEMBE Library."
 Eukarvoja, Metazea, Chordata, Craniata, Vertebrata, Fuleieostomi,
Mammalia; Eutheria; Primates; Catarrhini, Hominidae; Homo,
3223 TAGAAATTAGAAAAAATTAGTAAJTTTAGAGTTTAGATTTTAGTATTTGCAATGT 3282
 3283 GATATACTGTGTGGTTGTTTTAIAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAA 3342
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 CONA Library Preparation. Life Technologies, Inc.
CONA Library Arrayed by. The L.M.A.G.E. Consortion (ELNL)
DNA Sequencing by: Aparocourt Biosechare Corporation
Cloud distribution May clone distribution ictornation can be
tound through the L.M.A.G.E. Consortium/LLNL at:
 1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammallan Gene Collection (MGC)
 933 AAATGGAAGATGTGGTGATTTGATTTGAGTAAAGGTATGTGTGTGTGTGTATTTTA 592
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 Email: eqapbs-remail.nih.gov
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 Eukaryota, Motazoa, Chordata, Craniata, Vertobrata; Eutelcostomi;
Mammalia; Putheria; Rodentia; Sciurognathi; Muridae; Musimae; Mus
 1313 GATTATOCATTOAAAATTITAGCAAACTICIGAATGACAACA-TITITOALAIGI-CIII 1379
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893 AAAATAAAGATCTAGAIGCAAGAITAITITIGGATCAIGAIAAAAACTCITCAGAGITGAIT
 Mas mushilis (strain-097RL/61) 10 days embryo chwa to mewa
 close_lib:RIKEN full length, entiched mouse cONA library
 1371 ATTGGGGGGGGTGTTGTAGTGGGGGAGAGGGGAGATAGG 1410
 | HILLIHILIHIH | | HILLIHIHIHIHIHIHIHIH | 841 AFTGGCGTGCGCTCTTTGAGTTGTAATGGCCACATAIAGC 880
 High-efficiency tull-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
 Carninci, P. and Hayashizaki, Y.
 AK011246.1 CI:12847243
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 HTC; CAP trapper.
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Carminel.F., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K., Itoh,M., Konoo,H., CWazaki,Y., Muramatsu,M. and Hayashizaki,Y. Normalization and Subtraction of cap-trapper-selected cDNAs to prepare fall length cDNA libraries for rapid discovery of new genes demone Res. 10 (10), 1617-1630 (2000)
 Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Rinq, B., Rinqwald, M., Rodriquez, I., Sakamoto, N., Sasaki, H., Sarar K., Saroki, E., Saya, T., Shikala, Y., Storch, K. F., Suzuki, H., Foyo-oka, K., Wang, K. H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw Horis, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S.
 Adachi, A. Adawa, K. Akahita, S., Akimura, T., Aono, H., Arai, A., Arakawa, T., Roldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fivanda, S., Fikunishi, Y., Furuno, M., Hanadaki, T., Hara, A., Hayalsa, N., Hill, D., Hiramoto, K., Hiraka, T., Hori, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, T., Kato, H., Kawai, J., Kojima, Y., Konno, H., Kouda, M., Koya, S., Kurhara, C., Matsuyama, T., Myazaki, A., Nishi, Y., Wwunra, K., Mimazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Owackenbush, J., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Saito, H., Shibata, K., Takahashi, T., Shibata, K., Shibata, K., Takahashi, T., Shibata, K., Shibata, K., Takahashi, T., Iloya, I., Vamamuta, I., Yamanaka, I., Tataka, I.,
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 Submitted (10-JUL 2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Vokohama Institute: 1-7-22 Subhiro-chq, Isunumi-ku, Yokohama, Kanadawa 240 0445, Japan (E-mail:genome-reseasc.riken.go.jp, DRL:http://www.ac.ac.ac.ich.eo/pp.jp.nimi.81.45-508-9216)
 Kawai, J., Shinatawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishij, Y., Atakawa, T., Hara, A., Fukudishi, Y., Komoo, H., Adachi, J., Fukuda, S., Airawa, M., Nishi, K., Kiyosawa, U., Kondo, S., Yamanaka, I., Saito, T., Okaoaki, Y., Goldoori, T., Hono, H., Kasukawa, T., Saito, P., Kudota, K., Matsuda, H., Ashburner, M., Hataloy, S., Casavant, T.,
 Pleischmann, W., Gaasterland, L., Gissi, C., King, B., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, G., Kochiwa, H., Kochiwa, M., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, H., Kochiwa, M., Kono, H., Buldaerlik, F., Barshic, B., Bolman, G., Blake, J., Bolmielli, B., Bolmma, N., Fletcher, C., Fuinta, M., Cariboldi, M., Gustinere, S., Hill, D., Kolman, Cariboldi, M., Gustinere, S., Hill, D., Kolman, C., Fuinta, M., Cariboldi, M., Gustinere, S., Hill, D., Kolman, Cariboldi, M., Gustinere, S., Hill, D., Cariboldi, M., Gustinere, S., Hill, G., Cariboldi, M., Gustinere, C., Cariboldi, M., Gustinere, C., Cariboldi, M., Gustinere, C., Cariboldi, M., Gustinere, C., Cariboldi, M., Cariboldi,
 Functional annotation of a full length mouse cDNA collection
Nature 409 (6821), 685-590 (2001)
 Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and
 Hofmann, M., Hume, D.A., Kamiya, M., Lee, N.B., Lyons, P.,
 Genome Res. 10 (11), 1757-1771 (2000)
 (bases 1 to 1464)
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 Hayashizaki, Y.
 20499474
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Euryclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.

CDNA Library was propared and sequenced in Mouse Genome

Please visit our Web site (http://genome.gsc.riken.go.jp/) for

further details.

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 244 DAEGRADOTOTOTO TILLIA TILLIANGO A CAMANANA TAGAAA IGAGA ATAAA 303
 463 GATGAGATGCCATTGACTITTACTGAGGIACAGAAAAGCATAGAAAGCAGTGTCTATAAA 522
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 484 CIAAAAAGITICIIGGAICACAIITIIAFIAAGGTAAAAGGGGAAAGHAGAAAIGGAAGAI 543
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/lab_host='DBIOB (phage=resistant)"
/no="norgan 'reqls, Verrer, FVMV-SPAPT; Site_1, NSII;
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Average insert site_2.5 kb. Library enriched for
full-length clones and constructed by Lite lechnologies.
Note; this is a NIH_MGC_Library."
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CDNA Library Preparation: Lite Technologies, Inc.
CDNA Library Arrayed by: The 1.M.A.G.E. Consortium (LINL.)
DNA Sequencing by: Agencourt Bioscience Corporation
Close distribution: Agencourt Bioscience Corporation
Close distribution: An October distribution information, an be
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http://image.llnl.gov
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High quality sequence stop: 734.
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 381 POPATIGETICEACTOTICAGGAAATT-GGAAAGGACAIGIGAACTIATATATITGACAG 439
 440 ANOVANDAND PEGATATETAPTAAN JAAATTETGAATTEGATTEGTAAAAGT LICTLOGA 499
 283 TECASFIAATSCIAIGISTCCLEGACIAITITAIIAAACICICACCTCCCAISFIGCUA 342
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 Ouery Match 22.7%, Score 786, 38 Longth 1001; Best Local Similarity 95.1%; Pred. No. 1.40-143; Matches 833; Conservative 0; Mismatches 40; Indels 3.
 288 t
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rëmail.nih.gov
Tissue Procurement: ATCC
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/db_xref="taxon:9606"
/clone=":MAGE:5525683"
 /clone_lib-"NIH_MGC_92"
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Anote-"Organ: ovary (pool of 3); Vector: pCMV-SPORI6; Site.]: BrokV (destroyed); Site.2: Not!; RNA source pool of three evaries, from females ranging in age from 38 to 49 yo. Library is oliqo-dT primed and directionally cloned (BrokV site is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1.4.5 kb. Library is constructed by 6 or Grubor (Invitrogen), Research Genetics tracking code 036.
 AGENCOURT_6505183 NIH_MGC_125 Homo sapiens cDNA clone IMAGE:5588245
 linear EST 20-FEB-2002
 Eukaryoja; Metazoa: Chordata; Craniata; Vertebrata; Euteleos.comi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 1040-00AC1G1TATGAACACTATCCAACAATTAATGATTTTTAAATTGAGGAAGTGATCAAG 1099
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 980 PAPPAGAAAAAGIAACTIIGAIGAAGAGGIGAAIGIAAIIGGIGGAGAGAGAGIGGAGTFA 1039
 ciona Library Proparation: Lite Technologies, Inc., club Library Arrayed by: The L.M.A.S.B. Consortium (LLNL.) INA Sequencing by: Apencourt Rioscipence Corporation Clone distribution: MGC clone distribution can be
920 TTTF4GAFCATAAAAACFCTTCAGACTGATCTATAGACAGTTTTGAAACACAGAGAAA 979
 763 GGACTGTTATGAACACTATCGAACAATTAATGATCTTTAAATTCAAGGAAGTGATGAAG 822
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 National Institutes of Health, Mammalian Gene Collection (MGC)
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6) Gaps

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U; Mismatches

Matches 827; Conservative

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ALS97811 PKEZp31350816_11 313 (Synonym, Licer) Homo sapiens cone DKEZp31300816_51, mkNA sequence.
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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 1017
 3205 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAATTACTAATTTACAAATTA 3263
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 2968 AATTGCTGTGTTTATGGATAGTAAGAATGGCCCTAGAGGGGGACTCCTGATAACCAAG
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atka.A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann,S.). (Poustka A., Wellenreither,P., Mewes,B.W., Weil,R., and Wiemann
 Heidelberg/Germany) within the cFNA sequencing consortium of the
 /hote="Vector: pTripHEX2; Sitc_): SfilA; Sitc_2: SfilB; CNNA-collection"
 Fax. 49.30-84131128
Email: poustkaempimer-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
Clone from 5. Wiemenn, Wieceular Genome Aualysis, German Cancer
Research Center (UKF7), Email s.Wiemann9ukf2, Heidelberg.de;
sequenced by DKFZ (German Cancer Research Center)
 No st sequence available.
This clone (DKFZp3)300816) is available at the KZPD in Berlin.
Please contact the PZPD Pessourcencentrum, Heutherweg b, 14059
Berlin-Charlottenburg GPPMANN: Email: clonewryd de
Location Qualifiers
 1859 AAATACACTITGIGAACGCCTTCTGLCIGAGCACCCAGAATTAGAACATATCALCIGGAC 1958
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 Max Planck-Institute for Molecular Genetics
Thnestrasse 73, 14195 Berlin, Germany
Tel: +49-30-84131623
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 /orgapism~"Homo sapions"
/db yrof "fayon 9606"
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 "Mah_hoet - "PHIOR"
 German Genome Project.
 Contact: Poustka A.J.
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AASW SUFT_TGG 845 HIH_MRT_22 BOMS SILENS SDNA Clone IMAGE:6041564
 Homo sapiens
Eukaryota, Metasca, Chordata, Craniata, Vertebrata, Euteleostomi;
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 2499 THITGARGTARGTALT TOTTARACTAL GAMMARATCH DOCTIONATAL CANGOLD 1558
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 cDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The LLM.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the LLM.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 National Institutes of Health, Mammalian Gene Collection (MGC)
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 Email: cgapbs-r@mail.nih.gov
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Enkuryota; Metazoa; Chotdata; Craniata; Vertebrata; Enteleostomi;
 982 CONCONANANGTANGGITGALGANGGANGTGANTGTNATTGCTGGACACACTGCAGTTAGG 1041
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Clour distribution: MCC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
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 National Institutes of Health, Mammalian Gene Collection (MGC)
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 Mammalia: Butheria: Primates: Catarrhini; Hominidae; Homo.
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 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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 cloud into the Not I and Eco RV sites of the pCMVSFORT 6 vector. Library was normalized. Library was constructed by life Technologies. Contact: Feng Liang Life technologies, a Option of Invitrogen 9800 Medical Center Drive Perevile, Maryland 20876, USA Fax (1) 701 610 8371 Email: Illang@lifetech.com URL.
 AL563757 LIL_NFL061_NBC4 Homb sapieus cDNA clone CSOPDOATYAGE 3
 Joste-Torano Ersin Verter panysport 6-1st struct commands primed with a Notl-Oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and
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 Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria, Frimates, Catarrhini, Hominidae; Homo. [Townses] to 792)
Li.W.B., Gruber, C., Jessee, J. and Polayes, D.
Euil. Leaquh OnNA libraries and normalization
Unpublished (2001)
630 TAAAAQACTGTTATACCCATTAATGTTTTATGTTTTAATACTTTAAAAATTTAAAAAGTAG
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 Genoscope - Centie Mational de Segueneage
BP 191 91006 EVRY cedex - France
Email: segrelagenoscope.cus.lr, Web : www.genoscope.cus.lr.
 20.2%, Score 698.2, 08.9, Langth 792, 93.6%; Pred No. 2 Le-126; Line 23. Mismatches 23, Indels 3
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 cDNA Library Preparation: CLONIECH Laboratories, Inc. Pana Library Arrayed by: The I M.A.G.F. Consortium (LLNI) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution information can be Clone distribution. MCC clone distribution information can be
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 492 FISATAAAACHTTICAGAYTGATHTIMIAGACAGIII1GAAACACAGAGAACACCACGAAA 433
 MIB MGC http://mgc.o.i.uih.acv/. National institutes of Health, Mammalian Gene Collection (MGC) National institutes
 132 ICCAIGCITIALICAGAAGAAGACGALIAICCALICAAAATITIBGCACACTICLGAAI 74
 1348 GACAA-CAITITICAIAIGICIIIAAIGGGGGGGGGCGTC11GAGG11G1AA1 1397
 tound through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Email. cqapbs remail.nib.gov
Tissue Frocurement. CLONIESH Laboratories, Inc.
 Plate: LLCM1568 row: h column: 03
 Contact, Robert Strausberg, Ph.D.
 /organism-"Homo sapiens"
/db_xref-"taxon:9606"
 /clone="IMAGE:4717874"
 High quality sequence stop: 726.
 Location/Qualifiers
 BG570456.1 GI:13578109
 Unpublished (1999)
 Homo sapiens
 BG570456
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sequence: 5' CACGGCCATTATGGCC: 1' and 1' adaptor sequence:
 5. AICTANASSCROAMSCROAMSCROAMS and f. adaptor sequence: C. A. C. O. O. M. C. G. O. D. Average insert size 1.9 kb (range 0.5-4.0 kb). 12/15 colonies contained inserts by BCR. Phis library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: 118 is a NII_MSC_Library."
 linear EST 05-FEB-2002
 ACENCAURT 6456974 NIH_MGC_92 Homo Sapiens cons clone (MAGE:5576939
 (OB) ANTITATATGENETATTTTTTAATTTAACATGAACCITAGAAAATGEGTATGENA 3148
 2789 TATGGCCACALTLAATATCTCTCTTTTTGTGGATATAAAATGTGCAGATGCAATTG 2848
 2849 TEBBORGATIPPTAAGGCAPTIGAAATGTTAGTCATTGTTATTGTAAGAGTGAAAA 2908
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 1929 PERCHOANTACH HGOSTHOLING FACATALAGGEGARGH HGGLONGTHITATH 3088
 8149 TOTTOCAAATGCAATTIGATTGACT-GCCAFTCACCAAAFTAFCCTGAAGTCFTCFGC 3207
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 301 AFTGCTGTGTTTATGGATAGTAAAAAAAGGCCTAGAGTGGGAGTCCTGATAACCCAGGC 360
 121 TATGGCACATITAATATCTICAGCICITITIGIGGAIATAAAATGIGCAGAIGCAATIG 180
 541 AAAAALGGALATTALTAGAAALTAGAAAAATTACTAATTTTACAGALTAGATTTTAFF 600
 4; Gaps
 1 CYATOGALACCICAAACAAGGAAGAAAHGAGGAIGTCAGGAGCIIGGIGGAACIGTG 60
 26.0%; Score 692.2; DB-12; Length 767; 97.1%; Pred. No. 3.2e-125;
 338 COTCAGARGE AAAAGAAGIIACEGAITALITICIIGAIGGAAGTTAT 3435
 Indels
 219 PPPER AMARIGIDANG AND THE THILL THILL HILL HILL TO SEE AMARIA 1967
 18
 Pred. Mc. 3.2e-125;
0, Mismatches 18;
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 972 bb
 Local Similarity 97.19
ps: 747; Conservative
 57, mRNA sequence.
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 711 3
 HM466194
 COLLEGE MATCH
 DEFINITION
 RASE COUNT
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BM466194
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//lab_most="hB106 [phage=resistant)"
//nohe="Grada: testis: Vector: pGNVSPORT0; Site [: Not];
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Eukaryota, Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
 Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Lite Technologies Note: this is a NIH_MGC Library."
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 3025 AGGCCTGTCTGACTTGCCTTCTTTGAGCALALAGGTGATGTTGCTGTTT 3084
 Tissue Portrement: ATCC CDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The LM.A.G.E. Consertion (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution intormation can be
 2845 ATTGTTTGGGTGATTCCTAAGGCACTTGAAATG11AG1CATTGFFATT11A1ACAGAFFG 2904
 NIH MGC http://mac.uci.mih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Confact: Robert Strausberg, Ph.D.
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 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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 20.0%; Score 591.8; DB 13; Length 972;
 2 others
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 found through the 1.M.A.G.E. Consortium/LLNL at: http://imaqe.llnl.gov
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 High quality sequence stop: 621.
Location/Qualifiers
 /db_xret-"taxon:9606"
 Email. cqapbs-r@mail.nih.qov
 169 q
BM466194.1 GI:18515236
 96.78;
 184
 Rest Local Similarity 96.7
Matches 728; Conservative
 . 972
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//lab.host."DH10B (phage-resistant)"
//note_roran: skin; Vector: pCMV-SPORT6: Site 1: Not1:
Site_2 * SalI * Cloned unidirectionally Primer: Olige IT.
Average insert size 2 kb. Librar, cosstructed by Life rechnologies."
 Bukaryota; Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi;
4045 JALIAALIJATAEGEAFALITITIJAATITTAACAIGAACACCETTAGAAAAFGEGECTA 3144
 205 TGCAAAAATGGATATTATAGAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTTT 3264
 +TGCTTGTTTTATAAATTTTGCTTTT 3319
 0.145 TOTATOTTCCAAATGCAAATITGATTGACCATTCACCAAAATTAFCCTGAACTCTIC 3204
 1565 ACCATOTICACATOCATOCATICGATICCOTTICCATICCOTICACATICACOTITITA TITTOA 1625
 481 TATIAATITAIATGTATATTTTTTAATITAACATGAAGACCCTTAGAAAATGTGTGTA 540
 cDRA Library Preparation. Life Technologies, Inc. clos library Arrayed by: The I.M.A.G.E. Consortium (LLNL) bland sequencing by: Agencourt Hioseftence Corporation Close distribution: McC close distribution and close distribution and comparation can be
 National Institutes of Health, Mammalian Gene Collection (MGC)
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 Mammalia; Eutheria; Primates, Catarrhini, Hominidae, Homo.
 î,
 19.6%; Score 678; DB 13; Length 835; 100.0%; Pred. No. 1.9e-122;
 Indels
 1 others
 tound through the I.M.A.G.E. Consortium/LLNL at:
 137 g 233 t
 **20 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3351
 http://image.llal.gov
Plate: LLAM12206 row: e column: 07
 721 ATTAAGATAAAAGCTGGGAAGGAAAGTATAAGC 753
 Mismatchos
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Contact: Robert Strausberg, Ph.D.
Email: cqapts.r.mail til a.w.
Tissue Procurement: ATCC/DCID/DIP
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 High quality sequence stop: 647. Location/Qualifiers
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663392773FI NIH_M47_90 Home sapiess FGNA eleme IMASE:5402622 50, mRNA sequence.
 Edkaryota, McLabua, Chordata, Graniata; Vertebrata; Edteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 1866 TAAAAAANTGTATCAASTTAASTATOTSOBASSIAAATACACITIGIGAASGSCTTYGTC 1928
 1746 ATCTCCAAAGAAAAAGGTTGAAGTAGGGGTGTAAATTGTAGTGGAAATGGAGAGAGAGA 1805
 1806 AGCAACCTCAGCCTCCAGACCCAGAAGCAIIGAAAICTACCTCTTTCACTGTTTA 1865
 1926 TGAGCACCCAGAATTAGAACATATCAICTGGACCCTTTTCCAGCACACACCTGCAGAATGA 1985
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 553 ICCLCARACTGITE AGGARACATIC AAN GEGIIL GALCAAAGAAGAAGAGIA BALLC BL2
 cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution in GC clone distribution in GC clone distribution in Formation can be
73 TOTTATTAAAGAAFGAAGGAAGGAAGGAAGGAAGTGATGGAGGTTGAATGTGGGTTGTGT
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NIH-MGC http://mgc nci nih.gov/.
National Instituites of Health, Masmalian Gene Collection (MSC)
 313 TAMAMAMAGIGIATCGGCIAGCCIAICTCCGGCIAAAIACACTITGTGAACGCCITCTGTC
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Location/Qualifiers
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 Unpublished (1999)
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 Hōmō sapiens
 B1868359
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 2867 CACTTGAAATGITAGTCATTGTTATAGAAGATTGAA-AATCTTGTGAAATCCTGC 2925
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 2386
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 2507_GAAGGAACCTCCTAAACCACTGAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAG
 2567 CAGALGGAAGTAAACATCTCCCAGGAGTCCAAATTTCAGGAGAAACTGGCAGAATGA 2626
 2627 CTFCTACTCGAACACGAA FGAAAAGCAGAAAATGAATGATAGGATAGGATACCTCAAAACA 2686
 2687 AGGAAGAGAAGAAGGAGATCTCAGGACCTTGGTGGACACTGTGTACACTGTGGATTCATT 2746
 2747 GICTOTOACACATGICACTGALAIAACTITOCCAGGITOTOTITATGGGGGGGTTITAATAT 2806
 HTEFFELLER TETEFFELLER TETEFFELLER TETEFFELLER TETEFFELLER TETEFFELLER TOTAL T
 601 CATTANAAAGTIGIAGCAAAI NGTTTCCICITCCAAAGIAAAAITGCIGCIGCTITAIGG 660
 61 TGACTCCAAGATCAAGAATCTTAGTATCAATTGATGAATCATTCGGGACTTCTGAGAAGT 120
 4.21 GTCTCTCACAGATGTGACTGTAIAACTTTCCCCAGGTTCTGTTTATGGCCACATTTAATAT 480
 1; Gaps
 1 ATATT FOACCOTGAAGAGT COATATAAATTTTGAGAAGGTCTGCCAACACGACAAAAAA 60
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99.9%; Pred, No. 6.4e-119;
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 Copyright (c) 1993 -
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(without alignments) 7320.587 Million cell updates/sec January 17, 2004, 18:27:24; Search time 1984.45 Seconds ...TRMCKCKMNDSMDLSNKEEK 897 nucleic search, using frame\_plus\_p2n model 16154066 seqs, 8097743376 residues lotal number of hits satisfying chosen parameters: 1 MPPKIPKIAAIAAAAAAEP..... Xqapop 10.0 , Xqapext Yqapext Fidapoxt 6.0 ) Delevet Miximum DB seq length: 2000000000 Fost processing: Minimum March 0% May mum Match 100 US 09 026 459A 41 4631 Yeapop 10.0 , Francop 6.0 . Declop 6.0 . Minimum DB seq length: 0 Intle: Perfect Score: Service table: M protein Secquentices

Command line parameters:

Listing first 45 summaries

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| 1710.5   36.9   1364   11   1710.5   13.5   1051   13   1805.2027   4   1349   21.5   1051   13   1805.2027   4   1349   21.5   1051   13   1805.2027   4   1349   21.5   1051   13   1805.2027   4   1349   22.7   1   1405.2022   120.6   26.1   1   1405.2022   13   1805.2022   13   1805.2022   13   1805.2022   13   1805.2022   13   1805.2022   13   1805.2022   14   10.1   22.6   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   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 2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.   | 1710.5   36.9   1364   11   AKOLI1246   AKOLI1246   1551   34.5   1051   13   13   13   15   1051   13   13   13   13   13   13   13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1710.5   36.9   1364   11   170.15   1551   34.5   1551   35.9   1364   11   130.15   1551   34.5   1051   13   134761018   1348   11.3   10.01   13   13475604   1348   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4   13.4     | Result<br>No. | Scor | Query<br>Match | Length | ¥.         | 115          | beseription             |
| 1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,000   1,00   | 1         1.0.5         30.9         105.1         13.00         13.00         13.00         13.00         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.48         14.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| 1, 14, 18   1, 18   18   18   18   18   18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1339   13491   13   1340   13   1447   14   14   14   14   14   14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>⊣</b> ∩    | 1 7  | 00.00          | 1.504  | 1 0        | ARU1124 h    | Σ.                      |
| 4 1339 284 1001 13<br>5 1256 27 1 727 9 6<br>6 1256 8 25.1 886 13<br>9 1056 8 22.1 886 13<br>11 1030 22.4 9 1001 13<br>10 10 22.2 8 791 9 7<br>11 10 10 2 22.8 791 9 7<br>12 10 10 2 22.8 791 9 7<br>13 10 16 21.9 62.9 10<br>14 10 13 22.6 7 8 10<br>15 962 20.8 796 10<br>16 959 20.7 796 13<br>17 962 20.8 736 13<br>18 959 20.7 796 13<br>22 947.5 20.6 594 12<br>23 908 19.6 734 12<br>24 879.5 19.0 734 12<br>25 883.5 18.9 736 13<br>26 883.5 18.9 736 13<br>27 10 17.6 522 5<br>28 883 10 17.6 522 5<br>28 883 10 17.6 522 5<br>29 883 10 17.6 522 5<br>20 883 10 17.6 522 5<br>21 17.6 522 5<br>22 883 10 17.6 522 5<br>23 791 17.1 709 5<br>24 75 115.4 14.7 749 14<br>25 681 14.7 749 14<br>26 681 14.7 749 14<br>27 661 13.7 651 13<br>28 681 14.7 749 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 13.9   28.1   10.0   13   MAZ-252.7   10.0   10.0   13   MAZ-252.7   10.0   13   MAZ-252.7   10.0   13   MAZ-252.7   10.0   13   MAZ-252.7   10.0   10.2   13   MAZ-272.7   10.0   10.2   13   MAZ-272.7   10.0   10.2   13   MAZ-272.7   10.0   10.2   13   MAZ-272.7   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   10.0   1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1379   28   28   28   28   28   28   28   2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4 0           | ٦.   |                | 1001   | 7          | 100100 Mai   | ٠.                      |
| 1.54                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 124   124   127   13   14   14   14   15   12   12   12   12   12   12   12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | •             |      |                |        |            |              | ٠.                      |
| 12.55, 7   26, 7   880   14   12.08   26, 1   880   14   15.08   26, 1   880   14   15.08   26, 1   880   14   15.08   26, 1   880   14   15.08   26, 1   880   14   15.08   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20   20, 20 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20, 20, 20, 20, 20,                              | 1236.73   26.7   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0   4.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1256.73   26.7   4   4   4   4   4   4   4   4   4                                                                                                                                                                                                                                                                                        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| 7 1250, 250, 14<br>9 1056 5 25, 18 10<br>11 1037 22, 8 79, 4 13<br>11 1037 22, 8 79, 4 13<br>11 1030 21, 2 69, 4 10<br>11 1031 22, 8 79, 9 17<br>11 1030 21, 2 69, 4 10<br>12 1030 21, 2 69, 4 10<br>13 1030 21, 2 69, 4 10<br>14 1013 21, 9 871 9, 17<br>16 952 20, 8 73, 10<br>17 962 20, 8 73, 10<br>18 959 20, 2 734 12<br>20 947, 5 20, 5 734 12<br>21 99, 6 73, 10<br>22 947, 5 20, 5 734 12<br>23 90, 19, 6 734 12<br>24 879, 5 10, 6 734 13<br>25 883, 8 19, 6 737 10<br>26 833, 18 10, 6 46, 13<br>27 10, 17, 6 52, 12<br>28 83, 18 10, 6 46, 13<br>37 784 18, 5 70, 5 70<br>38 730, 5 15, 3 115, 4 10<br>41 640, 5 14, 7 74, 10<br>42 663 14, 7 74, 10<br>43 667 14, 7 74, 10<br>44 640, 5 13, 7 42, 10<br>45 13, 7 42, 10                                                                                                                                                                                                                                                                                                   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15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7   15.25.7      | n (           | -    | - 0            |        |            |              | - ,                     |
| 11.20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | e r           | -    | 7.97           |        | 7          | Remarks      |                         |
| 1111   10   10   10   10   10   10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Till                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | High State                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ` (           |      | T : 07         |        | 7          | 18M4 5 4 7 4 |                         |
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                                               | 9         10.65         2.2         8         47.4         4.0.7.6.47.1         4.0.7.6.47.1           10         10.45         2.2         8.14         4.0.7.6.47.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2         41.56.37.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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                                               | 1043   22.5   79.2   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   74.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7   75.56.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1043   22.5   79.2   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   74.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   75.56.77.7   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| 1   1037   22.4   605   9   1   1   1016   21.0   605   9   1   1   1   1   1   1   1   1   1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1037   22.4   605 9 All SEGREGAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1037   22.4   605 9 All Stages of the color of the colo   |               |      |                |        | _          | A1.563757    | Alife 4757 AliSt 8757   |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12   1034 0   22.2   694   19   19   19   19   19   19   19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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   | A1.599644    | Ai 5496 43 DKF2.p 41 4P |
| 13 1016 21.9 623 10<br>15 1004 21.7 922 12<br>16 952 20.8 788 10<br>19 959 20.7 594 10<br>20 947 20.7 594 12<br>20 947 20.7 594 12<br>21 98.5 20.6 584 12<br>22 98.8 19.8 20.5 53.4 9<br>23 98.8 19.8 520.5 53.4 9<br>24 88.2 19.8 53.4 9<br>25 88.2 19.8 53.4 9<br>26 88.2 19.8 53.4 9<br>27 95.8 19.8 53.4 13<br>28 88.4 18.8 52.2 12<br>29 88.4 18.2 684 13<br>30 824 17.8 644 10<br>31 781 17.1 764 13<br>32 730.5 15.8 615 4<br>33 730.5 15.8 615 4<br>34 781 15.8 615 4<br>35 708.5 15.8 615 4<br>36 708.5 15.8 615 4<br>37 751 17.1 769 5<br>38 730.5 15.8 615 4<br>39 667 14.7 743 14<br>40 667 14.7 743 14<br>41 640.5 13.7 425 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 13   1016   21.9   62.3   10 AW884181   AW544485   16.04   21.7   9.22   20.1   9.70.74485   16.04   21.7   9.22   21.1   9.70.74485   16.04   21.7   9.22   20.1   20.2   20.1   20.2   20.1   20.2   20.2   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.2   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4   20.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 13   1016   523   10   50   51   50   50   51   50   50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |               |      |                |        | < h        | BE08.2846    | PERCHANGE 1872 - PT 0.6 |
| 14 1013 21.9 871 9.7 15.6 15.6 15.6 15.6 15.8 15.7 15.8 15.8 15.8 15.8 15.8 15.8 15.8 15.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 14   1013   21.9   87   9 AA764485   AA764485   AA764485   AA764485   AA764485   AA764485   AA764485   AA764485   AA764244   AW468244   AW468244   AW468244   AW468244   AW468244   AW716543   AV716543   AV7164003   AV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 14   1013   9.72   12   12   12.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.5448   16.54   | ~             |      | 21.9           |        | 10         | AW58+181     | AW583181 jallh09.       |
| 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |               |      | 21.9           |        | 2          | AA764485     | AA76.4485 vw54h01.r     |
| 16   978   21.1   588   19   18   19   965   20.6   534   12   20   947.5   20.6   584   12   20   947.5   20.6   584   12   20   947.5   20.6   584   12   20   947.5   20.6   584   12   20   24   20   24   20   24   20   24   20   24   20   24   20   20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 16   978   21.1   588   10   AW468244   AW46R484   AW46R484   AW46R484   AW46R244   AW46R244   AW46R244   AW715544   B   959   20.0   8   13   13   14   15   15   18   AW715544   AW715744   AW715644   AW7156                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16   978   21.1   588   10   AW468244   AW468244   AW468244   AW468244   B   952   20.8   13   14   15   15   18   B   959   20.7   594   12   BF144857   AM5715544   AV715544   AV715448   AV715448   AV715448   AV715448   AV715448   AV715448   AV715644   AV715644   AV715644   AV715644   AV716644   | un<br>er      |      | ٠.<br>د.       |        | <u></u>    | BC25 354 4   | F 525 354 4 4.023 642.7 |
| 17 962 20.8 736 13<br>18 955 20.6 584 10<br>20 947.5 20.7 584 10<br>21 918.5 20.5 734 12<br>22 918.5 19.8 833 9 7<br>23 908 19.6 737 10<br>24 879.5 19.0 757 10<br>25 879.5 19.0 757 10<br>26 83.5 19.0 757 12<br>27 18.8 657 13<br>28 879.5 19.0 757 13<br>29 83.5 18.0 646 13<br>30 824 17.8 655 12<br>31 791 17.1 759 17<br>32 781 16.9 655 13<br>34 751 16.9 695 13<br>35 780.5 15.8 1154 14<br>36 667 14.4 651 13<br>41 640 5 13.7 425 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 17   962   20.8   736   13   H15156B   H115156B     18   955   20.6   594   10   MV715514     19   955   20.6   594   10   MV715514     19   955   20.6   594   10   MV715514     20   947.5   20.5   734   12   MV715519     21   918.5   20.2   633   9   A164033B   A164034B     23   908   19.6   797   10   H53927B   A1640034B     24   818.2   19.0   734   13   MV5928B   A162041     25   879.5   19.0   734   13   MV5928B   A162041     26   879.5   19.0   734   13   MV5928B   A162041     27   10.2   19.0   646   13   H440415   MV5928B   MV5928B     28   83.5   18.0   646   13   H440415   MV5928B   MV5928B     29   833.5   18.0   646   13   H440415   MV5928B   MV5928B     20   83.5   18.0   646   13   H440415   MV5928B   MV5928B     30   824   18.5   49.3   10   AM5522B   MV5932B   MV5933B     31   751   15.2   45.3   11.3   A4538B   MV5933B   A440658B     40   659   14.2   799   19   MV5933B   MV593B   MV593B   MV593B     41   640   5   13.7   425   10   MV593B   MV593B   MV593B   MV593B     42   651   13.5   81   12   H499839B   MV593B   MV593B     44   655   13.5   13.7   425   12   H499839B   MV593B     45   625.5   13.5   13.7   44.5   MV59B     45   625.5   13.5   13.7   44.6   MV59B   MV59B     46   625.5   13.5   13.7   44.6   MV59B   MV59B     47   625.5   13.5   13.7   44.6   MV59B   MV59B     48   625.5   13.5   13.7   44.6   MV59B   MV59B     49   625.5   13.5   13.7   44.6   MV59B   MV59B   MV59B     40   625   13.5   13.5   44.6   MV59B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 17   962   20.8   736   13   B15156B   H115156B     18   955   20.6   584   10   10344950     19   955   20.6   584   12   10344950     20   947.5   20.2   53.9   9   A164051     21   918.5   20.2   53.9   9   A164031     22   918.5   19.8   83.2   9   A164031     23   918.5   19.8   83.2   9   A164031     24   882   19.6   73.7   10   H55927B   A164031     25   879.5   19.0   73.4   18.152691     26   879.5   19.0   73.4   18.152691     27   862   18.5   59.7   12   H5931234     28   879.5   19.0   73.4   18.152691     29   873.5   19.0   67.4   18.154681     20   873.5   19.0   67.4   18.154681     20   873.5   10.2   67.1     21   873.5   10.4     22   873.5   10.4     23   791   70.1   70.9   74.4     24   75   10.2   45.1   10   AM502887     24   15.9   47.1   10   AM502887     25   870.5   15.3   115.4   14.7     26   14.2   47.8   10   AM50341     27   16.2   47.8   10   AM50341     28   870.5   15.3   115.4     29   40.5   10.4   10.4     40   65.9   14.2   34.0   10   AM51604     41   62.8   13.6   67.2   13   81868459     42   62.8   13.5   87.1   12   H598390     20   87.1   13.5   87.1     21   87.1   12   H598390     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   13.5   87.1     20   87.1   14.7     20   87.1   15.1     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4     20   87.1   10.4        | 2             |      | 21.1           |        | 0          | AW 16.8.2.14 | AW368234 CM3-B101       |
| 18 959 20.7 594 10 20 947.5 20.6 584 12 20 947.5 20.6 584 12 20 947.5 20.6 584 12 21 99.8 19.8 832 9 24 882 19.0 572 9 25 883.5 19.0 572 9 27 864 18.5 597 12 28 883.5 18.0 572 9 29 883.7 17.6 572 12 30 824 18.5 597 12 31 774 17.8 522 9 32 730.5 15.8 1154 14 33 730.5 15.8 1154 14 34 640.5 14.4 651 13 42 653 14.7 743 14 34 640.5 14.8 545 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 18         959         20.7         594         10         AV715534         AV715534           19         955         20.6         584         12         BF144650         BF144450           21         947.5         20.6         584         12         BF144650         BF144450           21         918.5         20.2         53.9         9         AL692790         AL64034         AL64034           22         98.5         19.6         79.7         1         BF2693         AL64034         AR146034           24         86.2         19.0         79.7         1         BF266942         BF147447           25         87.5         19.0         57.4         13         BF366942         BF147447           27         18.0         62.5         12         AL12041         BF147447         AL12041           28         87.5         19.0         57.4         13         BF164084         BF17474           27         18.0         67.4         10         BF28482         BF174704         BF174704           28         84.4         18.2         10         AR56084         BF1746084         BF1746084         BF1746084 <td< td=""><td>18         959         20.7         594         10         AV715534         AV715534           19         955         20.6         584         12         BR144950         BR144950           20         947.5         20.6         539         9         AL62239         AL69279           21         918.5         20.2         539         9         AL69279         AL69279           22         918.5         19.8         79.7         1         BR24693         Al646048           22         918.5         19.0         74         13         BR546942         Br646048           24         82         19.0         574         13         BR546942         Br6524794           25         84         19.5         74         13         BR546942         Br6524794           27         18.0         67.1         13         BR546942         Br654794         Br654794           28         84.4         18.2         64.6         1         Br654694         Br654794           29         84.6         19.6         64.7         1         Br66284         Br674694           20         84.7         10         Br672780         Ar64</td><td>17</td><td></td><td>20.8</td><td></td><td>1.3</td><td>B1151568</td><td>013181818 602918110</td></td<>                                                                                                                                                                                                                                                                                      | 18         959         20.7         594         10         AV715534         AV715534           19         955         20.6         584         12         BR144950         BR144950           20         947.5         20.6         539         9         AL62239         AL69279           21         918.5         20.2         539         9         AL69279         AL69279           22         918.5         19.8         79.7         1         BR24693         Al646048           22         918.5         19.0         74         13         BR546942         Br646048           24         82         19.0         574         13         BR546942         Br6524794           25         84         19.5         74         13         BR546942         Br6524794           27         18.0         67.1         13         BR546942         Br654794         Br654794           28         84.4         18.2         64.6         1         Br654694         Br654794           29         84.6         19.6         64.7         1         Br66284         Br674694           20         84.7         10         Br672780         Ar64                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 17            |      | 20.8           |        | 1.3        | B1151568     | 013181818 602918110     |
| 19   955   20.6   584   12   161149     21   947.5   20.2   534   12   181144     22   918.5   19.8   832   9   A16460     24   882   19.6   75.4   13   18526     25   879.5   19.0   75.4   13   18526     25   879.5   19.0   75.4   13   18526     26   879.5   19.0   75.4   13   18526     27   86.8   18.5   59.7   12   18024     28   83.5   18.5   59.7   12   18034     30   815.5   17.6   52.5   5.4     31   815.5   17.6   52.5   5.4     32   79.1   17.1   70.9     33   79.1   17.1   70.9     34   75.1   16.2   45.4     35   708.5   15.4   14   14     36   708.5   15.4   14   14     37   86.5   14.7   74.4     38   66.7   14.4   65.1   13   181696     40   65.4   14.2   14.8     41   40.6   51.4   14.8     42   65.3   13.7   44.5   10   181285     43   65.3   13.7   42.5   10   181285     44   64   54   13.7   44.5   10   181285     45   64.5   14.8   54.5   10   181285     45   64.5   14.8   54.5   10   181285     50   50.6   50.6   50.6     50   50.6   50.6   50.6     50   50.6   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6   50.6     50   50.6    | 19         955         20.6         584         12         BG149050         Bi143050           20         947.5         20.5         734         12         BG14857         AICH4967           21         947.5         20.6         539         9         AICH4034         AICH4067           23         90.8         19.6         77         10         HE5 9278         AICH4067           24         882         19.6         77         10         HE5 9278         AICH4067           25         19.0         77         1         BIS 527         BIS 5278         BIS 527.041           27         19.0         77         1         BIS 527         BIS 527.041         BIS 527.041           27         19.0         77         1         BIS 527.041         BIS 527.041         BIS 527.041           28         84         18.5         5         7         AICH40675         BIS 527.041           29         83.5         18.0         64.6         13         BIS 5288         BIS 52.041           20         84         18.5         AICH40675         BIS 52.042         BIS 52.042         BIS 52.042           21         84         18.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19   955   20.6   584   12   10144056   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10144055   10145045   10144055   10144055   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   10145045   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   1014504504   10145   | 18            |      | 20.7           |        | 10         | AV7155 + +   | AV715533 AV715533       |
| 20 947.5 20.5 734 12 BF144 22 918.5 20.5 33.9 9 AL6927 23 918.5 20.5 33.9 9 AL6927 23 918.5 20.5 33.9 9 AL6927 24 818.5 19.8 83.5 19.8 83.5 18.8 82.5 19.8 83.5 18.8 82.5 19.8 83.5 18.8 82.5 19.8 83.5 18.8 83.5 18.0 646.1 18.8 82.5 19.8 83.5 18.0 646.1 18.8 83.5 18.1 17.1 70.9 9 AL646.6 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 18.8 83.5 | 20         947.5         20.5         7.4         12         BF144857         A16402795           21         918.5         20.2         83.9         9         A1640289         A1640038           23         908         19.6         79.7         10         HE54929         A1640038           23         908         19.6         79.7         10         HE54928         A112041           24         818.2         9         A112041         A112041         A112041           25         19.0         73.4         13         B120408         B120408           27         19.0         73.4         B120408         B120408         B120408           28         87.1         B18.5         B24         B120408         B120408         B120408           29         83.2         19.0         646         13         HM50288         HM50288         B120408         HM1080288           30         82.4         13         HM400416         HM50288         HM4007128         HM4007128         HM4007128         HM4007128         MA70071278           31         15.2         45.4         13         HM4007146         A41007278         A41007278         A41007278 <td>20         947.5         20.5         7.4         12         BF144857         AL640239           21         918         5         20.2         9         AL640239         AL640239           23         918         5         20.2         AL640239         AL640239           23         908         19.6         79.7         10         HE54928         AL120341           24         88.2         9         AL120341         AL120341         AL120341           25         9.0         73.4         13         BL526942         BL524034           27         19.0         73.4         13         BL526942         BL524034           28         8.4         19.6         73.4         13         BL526942         BL5144834           29         8.4         19.6         73.4         13         BL526942         BL51444384         BL51444384           29         8.4         19.6         6.4         10         BE526942         BL51444384         BL51444384         BL51444384         BL51444384         BL51444384         BL51444384         BL514448694         BL5144486         BL51444384         BL51448694         BL5144486         BL5144486         BL5144449         BL514</td> <td>19</td> <td></td> <td>20.6</td> <td></td> <td>7</td> <td>186149050</td> <td>183143050 mm88c01</td>                                                                                                                                                                                                               | 20         947.5         20.5         7.4         12         BF144857         AL640239           21         918         5         20.2         9         AL640239         AL640239           23         918         5         20.2         AL640239         AL640239           23         908         19.6         79.7         10         HE54928         AL120341           24         88.2         9         AL120341         AL120341         AL120341           25         9.0         73.4         13         BL526942         BL524034           27         19.0         73.4         13         BL526942         BL524034           28         8.4         19.6         73.4         13         BL526942         BL5144834           29         8.4         19.6         73.4         13         BL526942         BL51444384         BL51444384           29         8.4         19.6         6.4         10         BE526942         BL51444384         BL51444384         BL51444384         BL51444384         BL51444384         BL51444384         BL514448694         BL5144486         BL51444384         BL51448694         BL5144486         BL5144486         BL5144449         BL514                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 19            |      | 20.6           |        | 7          | 186149050    | 183143050 mm88c01       |
| 21 935 20.2 539 9 ALG927 23 9 ALG927 23 99.8 19.8 83.2 9 ALG460 24 84.2 19.6 77.2 9 ALG460 24 867.5 19.0 77.4 13 B1526 25 83.5 19.0 77.4 13 B1526 25 83.5 18.0 77.4 13 B1720 25 83.5 18.0 77.1 7.0 70 ALG46 23 77.1 17.1 70.2 70 ALG46 23 70.5 18.6 71.2 70.1 17.1 70.0 70 ALG46 23 70.5 18.6 71.8 18.6 71.8 18.7 70.5 18.6 71.8 18.6 71.8 18.6 71.8 18.7 74.8 12 B1626 71.8 12.8 74.8 12 B1626 71.8 18.7 74.8 12 B1626 71.8 74.8 74.8 74.8 74.8 74.8 74.8 74.8 74                                                    | 21         935         20.2         539         9         ALG92730         ALG92730         ALG4038           22         918.5         19.8         79.7         HE5 49278         ALG40038         ALG40038         ALG40038         ALG40038         ALG40038         ALG40038         ALG40038         ALG40038         ALG40038         ALG40034         BC5         BC5         ALG40034         BC5         BC5         ALG40034         BC5         BC5         ALG40034         BC5         ALG40034         BC5         ALG40034         BC5         ALG40034         BC5         ALG40034         BC5         ALG40034         ALG50034                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 21         935         20.2         539         9 ALG92739         ALG92730         ALG92730           22         918.5         19.8         79.7         14.64038         He539278         ALG4038           24         90.0         79.7         14.8         15.25         ALG4034         He539278           25         82.5         19.0         774         13         BESE6982         BESE6943         BESE6943         BESE6943         BESE6943         BESE6943         BESE6943         BESE6943         BESE6943         BESE7043         ARG6288         ARG66288         ARG66288         ARG66288                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20            | 94   | 20.5           |        | _          | BF144857     | BF144857 60179034       |
| 22 918.5 19.8 832 9 A16460 23 908 19.6 797 10 H5539 24 802 19.6 797 10 H5539 25 879.5 19.0 774 13 B5526 25 879.5 19.0 774 13 B5526 26 873.5 18.9 724 12 H8731 29 833.5 18.0 444 10 H8791 29 833.5 18.0 444 10 H8791 31 815.5 17.6 522 5 AA7727 32 791 17.1 709 9 AA7548 34 754 16.9 208 11 H8456 35 730.5 15.8 615 9 AA9548 36 730.5 15.8 615 9 AA9548 37 667 14.7 748 12 H8402 38 667 14.7 748 12 H8402 39 667 14.7 748 12 H8402 41 640 5 13.7 425 10 HE26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 22         918.5         19.8         832         9         A1646038         A1646038         A1646038         A1646038         A1646038         A1659278         A1659278         A1659278         A165031         A1652031         A1662037         A1662037         A1662037         A1662037         A1662037         A1662037         A1662037         A1664037         A1662037         A1662037         A1664037         A1662037         A1664037         A1664037         A1664037         A1664037         A1664037         A1664037         A1664037         A1664037         A1666037         A1666037         A1666037         A1666037         A1666037         A1666037         A1666037                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 22         918.5         19.8         83.2         9. A164603H         A164603H         A164603H         A164603H         A165342         A165342         A165492         A165492         A165692         A165692         A165692         B1526942         B1660895         B1660899                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7             |      | 20.5           |        | ÷          | ALE 92793    | AC692730 DKE203141      |
| 23 908 19.6 797 10 HE539 25 872 9 10.1259 25 872 9 19.0 734 18.1259 25 19.0 734 18.1259 25 19.0 734 18.1259 29 85.4 18.5 18.9 6.25 12 19.044 229 833.5 18.0 646 13 HM499 29 833.5 18.0 646 13 HM499 30 18.2 17.8 6.2 10 18.0 6.6 13 HM499 33 791 17.1 709 9 18.0 6.6 13 HM499 35 730.5 15.8 615 9 48.9 18.8 681.5 115.4 18.18.0 67 14.7 799 14 78927 38 681.5 14.7 799 14 78927 38 681.5 14.7 799 14 78927 38 681.5 14.7 799 14 78927 38 667 14.7 799 14 78927 38 667 14.7 799 14 78927 38 667 14.8 8.45 10 18.285                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 23         908         19.6         797         10         HFS 59278         HES 59278           24         879.5         19.0         774         13         B122941         B122041           25         19.0         774         18         B122942         B122041           27         19.0         774         18         B122042         B122041           27         19.0         676         12         B624084         B122042         B122042           29         83.5         19.0         646         13         HM490415         HM1640412         B1262887         HM490412           30         824         19.0         646         13         HM490415         HM490415         HM490416         MM502887         HM490416         MM502887         HM490416         MM502887         HM490416         MM502887         HM490416         MM502887         HM490416         MM502887         HM490416         MM602887         HM490416         MM602887         HM460728         HM460728         HM460728         HM460728         MM6041728         M47004176         M47004214         M47004214         M47004214         M47004214         M47004214         M47004214         M47004214         M47004214         M47004214                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 23         908         19.6         797         10         HE539278         HE539278           24         879.5         9.0         724         3         ML12941         AL12941           25         19.0         724         3         HE56942         BL22408H         BL22408H           27         18.2         18.2         BG24408H         BL24408H         BL2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 22            | 5    | 19.8           |        | •          | A1646038     | A1646038 VW54310.x      |
| 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 24         BB2         19.0         57.2         9         ALLEGGAT           25         B7.5         19.0         73.4         13         BSSECBB2         BSSECBB2           27         B69.5         19.0         74         13         BSSECBB2         BSSECBB2           27         B69.6         22.5         12         BSSECBB2         BSSECBB2         BSSECBB2           29         B44         19.0         72         BSSECBB2         BSSECBB2         BSSECBB2           29         B44         19.0         72         BSSECBB2         BSSECBB2         BSSECBB2           29         B44         19.2         C44         10         BSSECBB2         BSSECBB2         BSSECBB2           30         B24         19.2         C48         10         AMSECBB2         BSSECBB2         BSSECBB2 <t< td=""><td>24         BB2         19.0         57.2         9         ALLEGORIA         BESSERBER         AMFOSTRR         BMFOSTRR         BMFOSTRR         AMFOSTRR         BMFOSTRR         BMFOSTRR         BMFOSTRR         BMFOSTRR         AMFOSTRR         BMFOSTRR         BMFOSTRR</td><td>23</td><td></td><td></td><td></td><td>10</td><td>HE5 19278</td><td>35190109 B276138</td></t<> | 24         BB2         19.0         57.2         9         ALLEGORIA         BESSERBER         AMFOSTRR         BMFOSTRR         BMFOSTRR         AMFOSTRR         BMFOSTRR         BMFOSTRR         BMFOSTRR         BMFOSTRR         AMFOSTRR         BMFOSTRR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 23            |      |                |        | 10         | HE5 19278    | 35190109 B276138        |
| 25 879.5 19.0 734 13 B1526 27 12 B0244 27 8624 18.5 597 12 B0244 22 83.4 18.5 597 12 B0244 23 83.5 18.5 18.5 597 13 B1526 28 83.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 25         879.5         19.0         734         13         B1526982         B1526982         B1526982           24         16.9         12.5         12         B6244088         B5244088         B15.44088           29         844         18.2         484         10         HE168095         HE168095           29         84.1         18.2         484         10         HE168095         HE168095           31         81.5         17.6         49.3         10         AMC0487         AMF02887           32         18.6         17.6         52.2         5         AAC1280         AMF02887           31         17.1         70.9         5         AAC1280         AAF66097           32         18.2         16.2         45.4         10         AWF03814         AAF72780           34         78.1         16.2         45.4         10         AWF03814         AAF50486           35         15.3         15.4         14.4         448         18.4         AAF50486           36         16.2         45.4         14         448         18.4         AAF50486           36         18.1         14.4         14.4         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 25         879.5         19.0         734         13         BISSESBE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7.            |      |                |        | ŗ          | AL120941     | A1.120541 DKP26762D     |
| 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 27         H69         F         18.8         C25         12         B524408H         B524308H         B524308H           27         84         18         6         13         HM4931234         HK16H095         HK16H095         HK16H095         HK16H095         HK16H094         HK16H094         HK16H094         HK16K02H1         HK16K02H1         HK16K02H1         AM5028H7         AM504572         AM504572         AM504572         AM504573         AM5045745         AM5045745         AM5045745         AM5045745         AM5045745         AM5045745         AM5045745         AM5045745         AM5045747         AM5045747         AM5045747         AM505706         AM5045747         AM5045747 <td>27         HG - F         18.9         C25         12         HE34408H         B 5,2408H           27         B 64         13         HE168095         HE168095         HE168095           29         B 3.5         B 9.0         646         13         HM40415         HK1612404           29         B 3.5         B 9.0         646         13         HM400415         HK1612404           31         B 5.1         B 0.0         646         13         AM502887         AM502887           31         B 15.1         A 16.2         A 16.2         A 16.2         A 16.2         A 16.2           32         A 16.2         45.1         10         A 16.2         A 16.2         A 16.2           34         A 16.2         45.1         10         AW51624H         AW510451         AW5104516           35         A 16.2         45.1         10         AW510451         AW5104516         AW5104516           37         A 14.7         4.4         13         B 1866441         HK164641         HK164641           40         6.59         14.2         340         A 22.0         A 22.0         B 18766536           41         6.2         14.2</td> <td>25</td> <td></td> <td></td> <td></td> <td>.m<br/>∈4</td> <td>BI526982</td> <td>BI526982 60292717</td>                                                                               | 27         HG - F         18.9         C25         12         HE34408H         B 5,2408H           27         B 64         13         HE168095         HE168095         HE168095           29         B 3.5         B 9.0         646         13         HM40415         HK1612404           29         B 3.5         B 9.0         646         13         HM400415         HK1612404           31         B 5.1         B 0.0         646         13         AM502887         AM502887           31         B 15.1         A 16.2         A 16.2         A 16.2         A 16.2         A 16.2           32         A 16.2         45.1         10         A 16.2         A 16.2         A 16.2           34         A 16.2         45.1         10         AW51624H         AW510451         AW5104516           35         A 16.2         45.1         10         AW510451         AW5104516         AW5104516           37         A 14.7         4.4         13         B 1866441         HK164641         HK164641           40         6.59         14.2         340         A 22.0         A 22.0         B 18766536           41         6.2         14.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 25            |      |                |        | .m<br>∈4   | BI526982     | BI526982 60292717       |
| 22 B58 18.5 597 12 HF931 29 83.4 18.5 597 12 HF931 29 83.4 18.0 646 13 HM496 29 83.5 17.8 18.0 646 13 HM496 23 18.0 667 14.7 79 14 HM496 25 18.0 18.0 18.0 18.0 18.0 18.0 18.0 18.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 27         B - 59         12         HEF931236         HUS 41236           29         B 44         10         HEI68095         HEI68095           29         B 33         18.2         646         1         HM 4002B87         HM 4002B87           30         B 24         10         646         1         HM 4002B87         AM 502B87           31         B 15.5         17.6         52.2         5         AAC 527B0         AM 502B87           32         791         17.1         70.2         5         AAC 527B0         AM 502B87           34         17.1         70.2         5         AAC 527B0         AAC 527B0         AAC 527B0           34         17.1         70.2         5         AAC 527B0         AAC 527B0         AAC 527B0           34         16.2         45.1         1         AAC 527B0         AAC 527B0         AAC 527B0           34         16.2         45.1         1         AAC 527B0         AAC 527B0         AAC 527B0           35         78.1         16.2         45.4         1         AAC 527B0         AAC 527B0         AAC 527B0           36         78.1         16.2         47.8         12 <t< td=""><td>27         B E5B         18.5         597         12         HE781236         HC941236           29         B 33         B 44         18.2         484         10         HE168095         HE168095           29         B 33         B 24         18.2         646         1         MM52887         MM402487         MM402487           30         B 24         17.6         52.2         5         AA727280         AA727280         AA727280           31         B 15.5         17.6         52.2         5         AA727280         AA746607         AA76607         AA7660</td><td>Ži.</td><td></td><td></td><td></td><td>급</td><td>BG244088</td><td>BC144088 60245815</td></t<>                                                                                                                                                            | 27         B E5B         18.5         597         12         HE781236         HC941236           29         B 33         B 44         18.2         484         10         HE168095         HE168095           29         B 33         B 24         18.2         646         1         MM52887         MM402487         MM402487           30         B 24         17.6         52.2         5         AA727280         AA727280         AA727280           31         B 15.5         17.6         52.2         5         AA727280         AA746607         AA76607         AA7660                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Ži.           |      |                |        | 급          | BG244088     | BC144088 60245815       |
| 29 834 18.2 484 10 HFIDES 29 8345 18.2 493 10 ANSO2 30 824 17.8 493 10 ANSO2 31 815.2 17.6 52.2 9 AAC924 33 791 15.9 2083 13 HM456 33 791 15.9 2083 13 HM456 33 708.5 15.3 1154 14 HM402 38 708.5 15.3 1154 14 HM402 38 68.5 15.3 1154 14 HM402 38 68.5 14.7 799 12 HFB27 38 68.7 14.7 799 12 HFB27 39 66.7 14.4 651 13 HFB24 42 653 13.7 425 10 HESB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 28         844         18.2         484         10         HELBROYS           29         83.5         18.0         646         13         HM40015         HM40015           30         82.4         17.6         49.1         1         AM502887         AM502810           31         815.5         17.6         52.2         5 AA52280         AM502810         AM502810           32         78.1         17.6         50.2         5 A1646097         AA54500         AA572780           34         78.1         16.2         45.1         10 AM502814         AM502514         AM504514           35         78.6         15.2         45.1         10 AM503514         AM504514         AM504514           36         78.1         15.4         14         14         BM602745         BM602745         BM602745           37         68.3         115.4         14         BM602746         AM504514         AA970484           40         66.7         14.7         65.1         13         B1696841         B160404         B160404           41         66.7         14.4         65.1         13         B169684         B160404         B1604084 <t< td=""><td>28         844         10         HELEBOUS         HELEBOUS           29         834.5         18.2         484         10         AWS02887         AMF024015           30         824         17.6         493.1         AMF02887         AMF02887         AMF02887           31         815.5         17.6         52.2         AA022780         AMF02887         AMF02887           32         791         17.1         70.9         AL446027         AMF028780         AMF02787           34         78.1         15.2         45.3         10         AWF65284         AWF067514         AWF067514           35         78.6         15.8         41.8         18         HR4667284         AWF067514         AWF067514           36         78.6         15.8         115.4         4.8         18         AWF067514         AWF067514         AWF067514         AWF067514         AWF067514         AWF077514         AWF</td><td></td><td></td><td></td><td></td><td><u>:</u></td><td>BE931236</td><td>BIS 41236 MRO-H101</td></t<>                                                                                                                                                                                 | 28         844         10         HELEBOUS         HELEBOUS           29         834.5         18.2         484         10         AWS02887         AMF024015           30         824         17.6         493.1         AMF02887         AMF02887         AMF02887           31         815.5         17.6         52.2         AA022780         AMF02887         AMF02887           32         791         17.1         70.9         AL446027         AMF028780         AMF02787           34         78.1         15.2         45.3         10         AWF65284         AWF067514         AWF067514           35         78.6         15.8         41.8         18         HR4667284         AWF067514         AWF067514           36         78.6         15.8         115.4         4.8         18         AWF067514         AWF067514         AWF067514         AWF067514         AWF067514         AWF077514         AWF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               |      |                |        | <u>:</u>   | BE931236     | BIS 41236 MRO-H101      |
| 29 833.5 18.0 646 13 HM440 31 815.5 17.6 52.2 5 AA5752 32 791 17.1 57.6 52.2 5 AA5752 34 784 16.2 208.1 13 HM456 35 730.5 15.8 6.15 9 AA9598 35 730.5 15.8 6.15 9 AA9598 36 68.5 15.4 14.7 79 14 18H02 38 681.5 14.7 799 14 18H92 39 667 14.7 799 14 18H92 40 669 14.7 799 14 18H596 41 640 5 18.8 651 13 B1696 42 633 13.7 425 10 BESB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 29         833.5         B.0         646.13         HM409415         HM409415         HM409415           31         B15.2         17.6         52.2         AAC72/280         ANF02887         ANF02887           31         B15.1         17.6         52.2         AAC72/280         AAC72/280         AAF46097           32         791         17.1         709         AAF46097         AAF46097         AAF46097           33         784         16.2         45.8         13         AAF46097         AAF46097           34         75.1         16.2         45.8         13         AAF56484         AAF56485           35         78.6         15.3         1154         14         AAF56484         AAF56485           36         681.5         14.7         799         14         C82304         HH596841         HH596841           40         654         14.2         340         13         H1996841         AAF5104         AAF5104           41         640.5         13         8         45         10         HF452220         HF585306         HF64654           43         628         13.5         42.5         10         HF656454         HF66654                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 29         #33.5         18.0         646.13.         HA409415         HA409415         HA409415           31         #3.5         18.0         646.13         ANF02887         AANF02887         AANF02887           31         #3.1         769.5         AAC72780         AANF02887         AANF02788           32         #4.1         17.1         769.5         AAC72780         AANF02788           34         #4.1         15.9         AAS74848         BA456728         AANF04788           35         #4.2         45.1         AAS64622         AANF04788         AANF04788           36         #4.2         47.8         #4.8         BA856848         AANF04784           37         #4.2         #4.1         BA956843         AANF04747         CPL2047           38         #4.7         #4.8         #4.8         #4.8         AAVF1604         AAVF1604           40         #5.9         #4.7         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8         #4.8 <td< td=""><td></td><td></td><td></td><td></td><td>10</td><td>BE168095</td><td></td></td<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |      |                |        | 10         | BE168095     |                         |
| 30 824 17.8 493 10 ANSO2 30 824 17.8 525 17.6 525 37.45.5 13.4 57.9 5 AAC72 32 791 17.1 702 5 AAC72 33 784 18.9 6.8 5 15.8 6.15 9 AAS938 35 730.5 15.8 6.15 9 AA9938 36 708.5 15.3 1154 14 INBHOX 38 681.5 14.7 79 14 CR23 0 657 14.7 79 14 CR23 0 657 14.7 748 11 BHG96 40 657 14.7 79 14 CR23 0 651 13 BHG96 41 640 5 13 B 5 A45 10 BESS 42 633 13.7 425 10 BESS 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30         B24         10         493         10         AM502887         AM502887           31         B15.5         17.6         52.9         AAG22780         AAG4602           32         791         17.1         70.9         AAG4602         AAG4602           33         781         15.9         208 ± 13         AM56228         AAG64622           4         751         16.2         45 ± 10         AM66228         AM66452           36         781         16.2         45 ± 10         AM503514         AAG6452           36         78.5         15.3         1154         AM664514         AAG76484           37         683         15.3         1154         AM604514         AAG76484           37         683         15.3         1154         AC7804         BE2304         BE304           39         667         14.2         340         14         CB204         CB2304         BE5304           40         659         14.2         340         10         AAG5104         AAG7404           41         640         5         13         BE64650         BE2304         BE2304           41         640 <t< td=""><td>  10</td><td>52</td><td></td><td></td><td></td><td>~</td><td>HM440415</td><td>PM499415 pappan,pk</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 52            |      |                |        | ~          | HM440415     | PM499415 pappan,pk      |
| 31 H5.5 17.6 522 9 AA7227<br>32 791 17.7 79.9 516.465<br>34 781 16.2 2083 13 HM456<br>35 730.5 16.2 453 10 AM703<br>36 708.5 15.3 1154 14 IMH02<br>37 708.5 15.3 1154 14 IMH02<br>38 67 14.7 79 12 IMB27<br>39 667 14.7 79 12 IMB27<br>40 653 13 8 463 10 AM751<br>41 640 5 13 8 445 10 IME85                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3.1         H15.5         17.6         52.2         9         AACA 2780         AACA 2780           3.2         791         17.6         52.2         9         AACA 2780         AACA 2780           3.2         781         16.2         45.4         10         AWS 0.5         AWS 0.5         AWS 0.5           3.5         78.6         16.2         45.4         10         AWS 0.5         AWS 0.5<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3.1         BIS.5         17.6         52.2         9         AA0722780         AA0722780           3.2         791         17.6         52.2         9         AM502278         AM50207         AM50207         AM50207         AM50507         AM50507         AM50507         AM50507         AM50507         AM50507         AM50507         AM50507         AM50514         AM505144         AM506144         AM506144 <t< td=""><td>30</td><td></td><td></td><td></td><td>C</td><td>AW502887</td><td>AW502887 UI-BF BN</td></t<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30            |      |                |        | C          | AW502887     | AW502887 UI-BF BN       |
| 32 791 17.1 709 9 A 16466<br>34 751 16.2 4031 13 HM455<br>35 730.5 15.8 615 9 AA9598<br>36 708.5 15.3 1154 14 BM102<br>37 68.3 14.7 4.9 14 C8230<br>38 681.5 14.7 799 14 C8230<br>39 667 14.4 651 13 B1696<br>41 640 5 13.7 425 10 BEB95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 32         791         17.1         709         9         Aff46697         Aff46075                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3.2         791         17.1         709         9         764-6697         Aff-46697         Aff-46667         Aff-46697         Aff-46697         Aff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7             | E    | 17.6           |        | ټ.         | AAC72780     | AA072780 mm76a05.1      |
| 33 784 16.9 2083 13 H4456<br>35 730.5 16.8 415 9 AA9598<br>36 708.5 15.8 415 9 AA9598<br>36 708.5 15.3 1154 14 INBROZ<br>38 681 14.7 799 14 C8230<br>39 667 14.7 799 14 C8230<br>40 653 14.7 799 10 AB951<br>41 640 5 18 8 545 10 BES95<br>42 633 13.7 425 10 BES95                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.3         784         16.9         208 : 13         HM45672H         HM45672H           4.4         16.9         208 : 13         HM46672H         AM764512           35         730.5         15.8         4.5         9         AA459846         AA459436           36         708.5         15.8         115.4         14         BM402746         BM402746         BM402746           37         68.1         14.7         7.9         14         RM402746         BM402746         BM402746           38         68.7         14.7         7.9         14         C8.2.304         C8.2.304         C8.2.304         C8.2.304         C8.2.204         B1696841         AM451604         AM451604         AM451604         AM451604         B1696841         B1696841         B1696841         B1696841         B1696841         B17676841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.4         784         16.9         208 !         13         HM45672H         BM4454728           3.5         730.5         16.2         45.4         10         AM504514         AM504514           3.5         730.5         15.8         16.2         45.4         10         AM504514           3.6         70.5         15.8         115.4         14.4         AM504514         AM504514           3.7         68.7         14.7         4.4         14.4         AM50451604         BEL7047         CR2304           3.9         66.7         14.4         65.1         13         H1696841         B1696841         B1696842         B1696841         B1696841         B1696841 </td <td>3.5</td> <td>7</td> <td>17.1</td> <td></td> <td>٠,٠</td> <td>A1646037</td> <td>AI646097 vw54h07.x</td>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3.5           | 7    | 17.1           |        | ٠,٠        | A1646037     | AI646097 vw54h07.x      |
| 34 751 16.2 453 10 AW/03 36 708.5 15.3 1154 14 IMMOS 36 708.5 15.3 1154 14 IMMOS 38 68.5 14.7 749 12 IMMOS 39 66.7 14.4 651 13 B1696 40 653 13.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 18.8 51.5 51.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 44         751         16.2         453         10         AW50.9514         AW50.9514           36         730.5         15.3         1154         14         BMH02746         BMH02744         BMH02746         BMH02746         BMH02746         BMH02746         BMH02744         BMH02746         BMH02746         BMH02746         BMH02746         BMP02746         BMP02746         BMP02746         BMP02740         BMP02726         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 44         751         16.2         453         10         AW503514         AW503514           36         730.5         15.4         14         BMH02746         BMH02746         BMH02745           36         708.5         15.3         1154         14         BMH02746         BMH02747         BMH02747         BMH02747         BMH02747         BMH02747         BMH27047         BMH27047         BMH27047         CH2304         CH230                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ~             | 7    | 9.01           |        |            | HM456728     | MM45.6728 ACHNOOFF      |
| 35 730.5 15.8 6.15 9 AA6598<br>36 708.5 15.3 1154 14 BMH02<br>37 68.1 14.7 4.18 12 BFB627<br>38 681.5 14.7 799 14 C8230<br>39 667 14.4 651 13 BF696<br>41 640 5 13.8 645 10 BE285<br>42 633 13.7 425 10 BE285                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 35 730.5 15.8 615 9 AMYSQB36 AMYSQB36 730.5 15.8 1154 1 BMH02736 BMH02736 37 683 14.7 4.8 12 BMH02736 BMH02736 BMH02736 BMH02736 38 681.5 14.7 799 14 CB2304 CB2304 CB2304 CB39 657 14.4 651 13 BH0596B41 AMYS1664 41 640.5 13.8 845 10 AMYS1664 BH1596B41 AMYS1664 42 638 13.7 4.25 10 BE285796 BH285796 BH2865546 AS 625.5 13.5 387 12 HF998390 BH2998390                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 35 730.5 15.8 615 9 AMYS9846 AAVES9846 AAVES9846 AAVES9846 AAVES9846 AAVES9846 AAVES9846 AAVES9846 AAVES9846 AVES 70.3 1.2 14.7 14.8 12.8 18.8 27.0 47 79.9 14.8 12.8 14.7 79.9 14.8 12.8 14.7 79.9 14.8 12.8 14.8 14.8 14.8 14.8 14.8 14.8 14.8 14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7             |      |                |        | 0.         | AW503514     | AW504514 UT HF BN       |
| 36 708.5 15.4 1154 14 INH02 36 68.1 14.7 448 12 INF92 39 66.7 14.7 79 14 CR30 40 66.7 14.4 651 13 B1696 40 65 13.8 64.5 10 BL205 42 63.4 13.7 425 10 BL205                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 36         708.5         15.3         1154         14         BMH02746         BMH02746           37         74.1         14         BPB27047         BPB27047         BPB27047           38         681.5         14.7         749         14         CB2304         CB2304           39         667         14.7         599         14         BFF96841         BFF66841           41         669         14.7         580         10         AMYS1604         AMYS1604           41         640         51         18         44         BFF66841         AMYS1604           42         633         13.7         425         10         BE285796         BFF87596           43         628         13.7         425         10         BFB85796         BFF87596           44         628         13.5         387         12         BF998390         BF998390                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 36 708.5 15.3 1154 14 BMH02746 BMB02746 BMB02746 BBB027047 BB 68.3 14.7 4.38 1154 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 14.7 4.38 11.3 BIG96841 BBC96841 BBC96841 BBC96841 BBC96841 BBC96841 BBC9684 BBC9684 BBC9684 BBC9684 BBC9684 BBC9684 BBC96846 49                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 35            |      |                |        | 5          | AA959836     | A959836 V               |
| 37 683 14.7 438 12 BFB27<br>38 681.5 14.7 799 14 C8230<br>49 657 14.4 651 3 MFB56<br>40 659 14.2 380 10 AWM51<br>41 640 5 13 8 545 10 BE285<br>42 633 13.7 425 10 BE285                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 37         683         14.7         438         12         BFB27047         BFB27047           38         681.5         14.7         799         14         C82304                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 37         683         14.7         438         12         RFB27047         RFB27047           38         681.5         14.7         799         789         789         789           39         667         14.4         789         13         RF96B41         R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 36            |      |                |        | 14         | ISMB027.46   | BMR02746 AGENCOUR       |
| 681.5 14.7 799 14 CB230<br>667 14.4 651 13 BF696<br>659 14.2 380 10 AW492<br>640 5 13.7 425 10 BE285                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 38 681.5 14.7 799 14 C82304 C823004 C8230 C82300 C8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 38 681.5 14.7 799 14 C82304 C8 |               |      |                |        | <u>~</u> 1 | 4            | BF827047 R°3-BN00       |
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AK011246 1364 bp mkNA linear HTG-19 JAN-2002 Mns musculus 10 days embryo whole body cDNA, R.KEN 1411 length enriched library, clone:2603017M22:relinoblastoma 1, 1411 lusert sequence. DEFINITION ACCESSION RESULT 1 AKU11246 VERSION KEYWORDS SOURCE LOCUS

Mus musculus (strain:05781/63) to days embryo cDNA to mkNA, clone\_lib:RIKEN tull-length enriched mouse cDNA library AKÖ11246 AKÜ11246.1 GI:12847243 HTC; CAP trapper.

clone:2600017M22. ORGANISM

Mammalia; Eutheria; Rodentia; Schuroquathi; Muridae; Murinae; Mus Eukaryota; Metazoa; Chordata: Craniata; Vertebrata, Enteleostomu; Mus musculus

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Carningi, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konbo, H., Gkazaki, Y., Muramaisu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare [ull] length cyba libraries for rapid discovery of new genes Genomy Pes. 10 (10), 1617-1630 (2000)
 Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Suni, N., Shifi, Y., Nakamura, S., Hazama, M., Nishino, T., Harada, A., Yamamoto, R., Matsunco, H., Sakaguchi, S., Ikgami, I., Kashiwagi, K., Fujiwako, S., Irogawa, Y., Isawa, T., Ozawa, K., Tanaka, T., Matsunca, S., Kawai, J., Okacaki, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsunca, S., Kawai, J., Okacaki, Y., Muramatan, M., Inoue, Y., Kira, A. and Hayashizaki, Y. Sarkiki, N. Inoue, Y., Kira, A. and Hayashizaki, Y. Soquencing pipeline with 344 multicapillary sequencer occurrence Res. 10 (11), 1757-1771 (2000)
 High-efficiency full length cDNA cloning
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 Wynshaw-Boris.A., Yoshida.K., Haseqawa,Y., Kawaji,H., Kohlsuki,S
 Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of
 Functional annotation of a full-length mouse cDNA collection
 Nature 409 (6821), 685-590 (2001)
 Hayashizaki,Y.
Direct Submission
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 Coase Visit our well site (bright) general services (L.E.) for further details.
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522 CysCluHisArgIleMetOluSerLeuAlalrpLeuSerAspSerProLeuPheAspLeu 541

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Mammalia: Eutheria: Primates: Catarrhini; Hominidae: Homo.
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 662 (1970) WYTANGAS ATHEST (688) GOOD CANCELLY GOOD (81) HILLIGHT HILLIGHT HILLIGHT)
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 622 LysValTyrArqLeuAlaTyrLeuArqLeuAsnThrLeuCysGluArqLeuLeuSerGlu 641
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National Institutes of Health, Mammalian Gene Collection (MGC)
 PhoTyrAshSorValPheMotG'rArgles;ysThrAshIL 737
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Email: cqapbs r4mail.nih.gov
Tissue Procurement: ATCC
 High quality sequence stop: 690.
Location/Qualifiers
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 Unpublished (1999)
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1 (bases 1 to 1001)
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 104 [contype]affeAcpThrSetThr[ysVa]AspAvnA]aMedSerArdLeuLysLys 123
 98 TATGAFGTATEGTTTGGACTCTTCAGGAAATTCGGAAAGGACACGTGAACTTATATATTT 157
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 Contact: Robert Strausberg, Ph.D.
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 712 LeullelysGludlaGluTyrAspSerIleIleValPheTyrAsnSerValPheMetGln 731
 532 Asuffielen/yssluArqfenLeuSersluHisProslufensluHisIletleTrpThr 651
 52 LeuPhedlnHisThrLeuGlnAsnGluTyrGluLeuMetArqAspArqHisLeuAspGln 671
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 TEGATUAAAGAAGGGAATATGATTUTATTATAGTATTCTATAACTGGGT0TTCATGGGGG 361

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 352 ProHisileProArqSerProTyrLysPheProSerSerProLeuArq11eProGlyGly 771
 Max Planck-Institute for Molecular Genetics thoustrasse 73, 14195 Rerlin, Cormany Tel: 49-30-84131623
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 Mational Institutes of Health, Mammalian Gene Collection (MGC)
 126 ValleufheAlaLenfheSerLysLeuglaAraThrCysChuLeulleTyrLeuThrSta 145
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 206 CluProTyrLycThtAlaVallleProlleAsnGlySerFroArgThrFroArgArqGly 225
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 226 CHOSHAIGSCLALGAIGEALGSCINLEIGHUASDASPCHAAG FOLLEGINVAL 248
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 465 oSerOluAsuLeufle SerTyrPheAsuAsuCysThrValAsu- ProLysGluSerI 384
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National Institutes of Health, Mammalian Gene Collection (MGC)

Contact: Robert Strausberg, Ph.D. Email: cgapbs rimail.nih.gov Dissue Programment: ALCC/DCID/DIP

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Mammalia, Pythoria, Dyimafos, Catarrhini, Hominidae, Hemo
 739 AspSerIleIleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 738
 *. 8 SALICIALIALIALIALIA ARGIGGE ETTERA GRAGACTOARA ARATA ETTE 667
 149 SIGITIA ASSETTATA PROPER TARGET SET SET OF THE PROPERTY OF
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 257 (hoiyriys---PhoProSerSerProLeu---ArgilePro---GlyGlyAsn---- 772
 1 (bases 1 to 1023)
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National Institutes of Health, Mammalian Gene Collection (MGC)
 Clone distribution: MCC clone distribution information can be
 302 HisAlaValGloGloThrPbeLysArqValLeuIleLysGluGluGluTyrAspSerIle 721
 CBNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation
 found through the L.M.A.G.E. Consortium/LLNL at: http://imane.ilml.gov
Plife: LLAM12204 rew: 3 column: 22
 Conservative:
 Migmatches:
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 Matches:
 Length:
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 Contact: Robert Strausberg, Ph.D. Email: egapbs-r@mail.nih.gov
 Dissue Producement: AICC/DCID/DTP
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AA763411 Starts_mammary_qland_NNLMG Mus musculus cDNA clone VAS40404.1 Soares_mammary_qland_NNLMG Mus musculus cDNA clone IMARE 1347548 5' similor or about 400 PETIX WILAGE VASCOUNTINE PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma susceptibility
 Marra_M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and
 Mainmalia, Eutheria, Eudentia, Scieregnathi; Muridae; Muricae; Mus.
1 (bases 1 to 914)
 Fukanyuta, Mutazuan Chordatan Oramiatan Vertebratan Buteleostomin
 This close is anailable rogalty free through LLNE, contact the IMAGE Consortium (info@image.lini.gov) for further information.
 722 HevalihetyrasnServalpheMetGlinArgidenysthrAsniileLeudlintyrala 741
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 WashU-HHMI Mouse EST Project
Washington University School of MedicineP
 Seq primer: -28ml3 rev2 EI from Amersham
 Contact, Marra M/Mouse EST Project
 The WashU-HHMI Mouse EST Project
Unpublished (1996)
 Email: mouseest@watson.wustl.edu
 protein (MOUSE),, mRNA sequence.
 ÀA763411 GI:2813158
 Tel: 314 286 1800
Fax: 314 286 1810
 Mus musculus
 Waterston, R.
 house mouse.
 MCT:661286
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High quality sequence stop: 422.

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Another poor party of the pare (Planmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary dand tissue from a lactafing formatic, and was then primed with a Not 1 - OliquedD) primer, bobblerstranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not 1 and closed into the Not I and Eco RI sites of the modified pT2T3 v.c.o.. Library is conducted. Library was constructed by Bento Soares and M. Patima Bonaldo. **
 305 PheteuAspHisAspLys1htLeuGInThrAspSerTLeAspSerPheGluthrGlnArg 324
 425 ThrProArqLysSerAsnLeuAspGluGluValAsnValIleProProHisThrProVal 344
 HISE ACCOMPANIAAAA CACCOLLOL GAAGGGGGAAACGGGG FIACTGGGGGGACGGGGTF 798
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 197 TGGGGTGTTFTGGAACCTALCCAACAATTTATTGTGATTTTAAACTGGGGGAATGAGGCGC 738
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 485 InvilysArqValLysAspileClyTyrIlePheLysGlaLysPheAlaLysAlaValGly 404
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 882 TOGATICTGAACSTACTTAATTTAAAGCCITTGATTTTACAAAGTGAITGAAGTTTT 323
 505 fletysAladludlyAsuLeaThiArqGloMetileLysHisLeuGluArqCysGluHis 524
 405 GludiyöysValdiniletiyserOlaArqTyrLytLeuSiyVaiArqEetTyrTyrArq 424
 Account 115-"Scarces_mammary_qland_NMLMG"

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/mole-Torgan: brain; Vector: pCMVSPOKT 6; 1st strand cDNA was primed with a NoT offor(dT) primer. Five prime end enriched, double-stranded clNA was disested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPOKT 6 Vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Hand Life Technologies, a division of Invitrogen 9000 Medical Center Drive Rockville. Maryland 20850, USA Eax; (I) 401-610.
 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Verrebrata; Euteleostomn;
 ALS64757 LIL_NELO01_NBC4 Homo sapiens cone esconon07YA09 3
 585 LyselySerihrlhrArqValAsnSerihrAlaAsnAlaGluthrethAlathrSerAla 504
 525 ArgileMetGluSerLeuAldIrpLeuSerAspSerProLeuPheAspLeuTletysoln
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 545 Sert-ysAspArgCluGlyProThrAspHisLenGluSerAlacysProLeuAsitLeuPro
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Email: seqret qenoscope.cus.fr, Web : www.qenoscope.cus.fr.
 Mammalia: Butheria: Primates: Catarrhini; Hominidae: Homo.
 26 others
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38
 Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
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84.54%
81.89%
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mRNA linear EST 14-AUG-2001
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 7.1 AGTGGAGGGWTAGCAACACACYTAGAAATTGATACAAGAATTATTGAAGGTTGTGTAAA 672
 49 CluffedioCysAscIleAspoloVallyeAsnValTyrPhelysAscPbelleProPhe 208
 269 Met Asniser Lica 01/1/10 a Valifit Sch Asn 01/1/10 a Lica Val 01 a Ashiloa Schigs - 288
 2mg ArqTyr:1:11:11:11:11:11:041;3AsnLysAspLeuAspAlaArqLeuPheLeuAspHls 308
 37] GACAYIWICCAACAATIAATGAIGIIIITTAAATTCAGAAAGTGTTGAAAGTTTGAGAAATT 312
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Koother.K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.
ESI (Koehrer,K., Bayer,A., Mewes,H.W., Weil,B. and Wiemann,S.)
Onpublished (1999)
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 49 AsnihriledindinienmetmetiletenAsnSerAlaSerAspGlnProSerdiuAsn 368
 (6) LeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArgVal 388
 251 AAGGATWTKGGATACWTYTTTAAGGAAAATTTGCTAAAGGCTGTGGGACAGGGTTGTGTC 192
 409 GluffedlySerGlnArgTyrLysLenGly--ValArgLenTyrArgValMetGluS 428
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 428 erMetLeuLysSerGluGluGluArgLeuSerIleGlnAsnPheSerLysLeuLeuAsn- 447
 448 AspAs::llePheHisMetScrLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 467
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PMFPP[13P992_t] 412 (Spronym: bloc2) Homo sapiens chara clone
PMFPP13P092 57, mRNA sequence.
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 ALS99633.1 GI:15162921
EST
 Contact: Kochrer K
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 AL59633
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Research Center (DKT2); Email s.wiemann:dktz-heidelberg.de:
sequenced by BMSZ (Biomedical Research Center at the Charite,
Berlin/Germany) within the CDNA sequencing consortium of the German
 publ-"Vector.pTiplEx2, Site_1. StifA, Site_2: SlifB:
cDNA-collection*
Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
 Flease contact the RZFD: Ressource.zentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERMANY, Email. cione@rzpd.de.
 284 CluAsnLcuScrLysArgTyrCluClullcTyrLculysAsnLysAspLeuAspAlaArq 303
 121 GAAAATCTTTCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGA 180
 804 LeafheleaAspHisAspLysThrLeuGhThrAspSerileAspSerfheGluThrGlu 323
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 384 IleLeuLysArqValLysAspileGlyTyrIleFheLysGluLysPheAlaLysAlaVal 404
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 424 ArgValMetGluScrMctLcuLysSerGluGluGluAraLeuSerlleGluAsnPheser 443 [HTHTHHHHHHHHHHHHHHHHHHHHHHHHHHHH
 1 GAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAGAGAAAAATGTI1ATTICAAA 60
 No si dequence available.
This clone (DKFZp313F092) is available at the RZPD in Berlin
 244 GluValLeuCystysCluHisGluCysAsnIleAspCluValLysAsnVallyrPhctys
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ВСТ HTO642 210200-014-е06 BTO642 Homo sapiens CDNA, mKNA sequence.
ВЕОИ.2846
 from ORESTES PCR (# 8 Letters Patent application No. 196, 716 - Ludwig Institute for Concer Research) profiles into the pUC B vector. Reverse transcription of tissue mRNA and cDNA adiplication were performed under low sittingney conditions.
 Dias Neto, E., Garcia Gorrea, K., Verjovski-Almeida, S., Briones, M.K., Nagai, M.A., da Sliva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, S., Simpson, D.H., Brunstein, A., Golyveia, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
 /note-"ordan: breast; Vector: pucl8; Site_1: Smal; Site_2: Smal: A min! library was made by cloning products derived
 This sequence was derived from the PAPESP/COP Burnan Cancer Genome Project. This city can be seen in the following ORL (Hitter Town a lwin or All Actives quibrain pintlers professional actives and active for the contract of the contract o
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 Shotqun sequencing of the human transcriptome with ORF expressed
941 PRACHAMINALOGAMONTHAMAICAGAAGAAGAAGALIATOGATHGAAALITTAGG 600
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 Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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 Laboratory of Cancer Genetics
 Fax: +55-11-2707001
Email: asimpson*!udwiq.org.br
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 Contact: Simpson A.J.G.
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475 AssovysThuValAssiProtysGluSerileLeuLysArqValLysAspileGlyTyrile 394

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Melton, D., Meadows, A., Chifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Mattin, J., Elistain, A., Schmitt, A., The Ising, B., Kitter S., Rouko, L., Bennett, J., Cardenas, M., Gitkons, M., McCann, R., Cole, R., Tsaqarels, Williams, T., Jackson, Y., and Bowers, Y. Washu Barvard Fancreas ESI Project
 EST 14 MAR: 2002
 Endocrine Paintreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave. Cambridge,
 Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
 For information on obtaining a clone please contact: Juliana Brown
 Eukaryota, Metazoa: Chordata: Craniata: Vertebrata; Euteleostomi;
Mammalia; Eutheria: Primates; Catarthini; Hominidae; Homo.
 iallhogy Human Pancreatic [S] tops mENA linear EST [4 MAK-2 iallhogy] Human Pancreatic [S] ots Home sapiens connectioned [MAGE: 58 18049] for similar to ab: MT54ne RETINOBLASTOMA ASSOCIATED PROTEIN (BHMAN); que m26 39 Mease retinoblastoma susceptibility protein (MOUSE); mRNA sequence.
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495 PhetysclutyspheAlatysAlaValGtychuctySysValgtutlectyserchnArg 414
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 Email: dmelton/biohp.harvard.edu
 (brown fas.harvard.edu)
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 Fax: 617-495-8557
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 Ander Witten Finatests Vector, FSFSTI, Site_1, Not 1, Site_2, Sal 1, Library constructed using SuperScript Plasmid (brany vit (iffe Technologies) constructed by oligo-df priming. Size-selected by column fractionation.
This sequence now available from the IMAGE consortium, for clone orders contact: intowimmage.llnl.gov
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/note-"Vector: pT7T3D-Pac (Pharmacia) with a meditied polylinker; lst.strand cDNA was prepared from mannary gland Lissue from a lactating temale, and was then primed with a Not I wilgo(dT) primer Fooklie-strand-d vDNA was ligated to Eco RI adapters (Pharmacia), digested with Not modified pT7T3 vector. Library is normalized. Library
 i (bases 1 to 871)
barro,M., Hillier, Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kiroaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptoe,M., Tan,P., Underwood,K., Moore,H.,
 Mus musculus
Rukaryota, Mctaroa, Chardata, Craniata, Vertebrata; Euteleostomi:
Mammalia, Butheria, Rodentia, Sciarognathi; Muridae; Musinae: Mus
 Library
 vw54h01.rl Soarces_mammary_alacd_NMLMC Mus musculus cDNA close
IMAGE:1247665 5' similar to qt.M15400 RETINOBLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mouse retinoblastoma susceptibinty
protein (MOUSE):, mRNA sequence.
 This close is available toyalty-free through LLML, contact the IMAGE Gossotiom (info@image.ilml.gov) for further information. MGI:661353
 was constructed by Bento Soares and M. Fatima Bonaldo.
172 c. 204 q. 251 t. 2 others
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 Theising, B., Wylie, T., Tennon, G., Soares, B., Wilson, R. and Waterston, R.
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Washington University School of MedicineP
444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
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linear EST 13-FEB-2001
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Mammaliar Eutheriar Primates; Catarrhini; Hominidae; Homo.
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HUY TIME GERETHINGALAPTANTEGACATTAGGGGGTITTTAATHIGEGCAAGTAICA 245
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## SUMMARIES

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| 0.4            | 5.9      |                | w)          | ۲,             | A1606529             | A1606529 vb27408.y                          |
| 7              | S.       | 14.2           | # *#        |                | BF827047             | BF827647 RC3 HB052                          |
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Dormalization and subtraction of cap trapper-selected cDNAs to
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commone Res. 10 (10), 1617-1630 (2000)
 Marchionni, L., Mashima, J., Mazzarcli, J., Mombacrts, P., Nordone, P., Ring, H., Ringwald, M., Rodriguez i Sakamara, N. Sasaki, H. Sato, R., Seporbach, C., Seya, T., Shibaca, Y., Stoch, K. R., Suzuki, H., Toyo-oka, K., Mang, K. H., Weitz, C., Whittaker, C., Wilming, L., Wynshuw-Boris, A., Yoshida, R., Hasegawa, Y., Kawaji, H., Kohtsuki, S. and Hayashizaki, Y.
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 Submitted (10-101-2000) Voshibide Hayashizaki, The Institute of
 Shibata, K.,
 Functional annotation of a full-length mouse cONA collection Nature 409 (6821), 685-690 (2001)
 Carmingi, P., Shibata, Y., Hayatsu, N., Sugahara, Y.,
 High-efficiency full-length cDNA cloning
Meth. Enzymol 303, 19-44 (1999)
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 201 ALGSOLGSLUVALLOGSLUMASFASFLOUVALITOSERBAGINIAMMALLEG 220
 221 /ysVallæuAspTyrPhelleLysLeuSerProProMetLeuLeuLysGluProTyrLys 240
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 261 AlaArqI1eAlaLysGluLeuGluAsnAspThrArqI1eI1eGluValLeuCysLysGlu 280
 281 HisdluCysAsmileAspolmVallysAsmValTyrPh⊝lysAsmPh∈Il⊖ProPh⊖M⊖t 300
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Mammalia: Eutheria: Primates: Catarrhini: Hominidae, Homo.
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Email: cqapbs-r*mail.nih.qov
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553 CysGluHisArgIleMetGluSerLeuAlaTrpLeuSerAspSerProtreuPheAcpLeu 522

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 424 ATTAAACAATCAAAGGACCGAAAAAAAAAAATGAICAGTIGAALGIGGTIGGTGIT 483
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 (3 thrsetAlaPhedInThrGludysProteutysSerThrSerLeuSerLeuPheTyrtys 652
 784 GAACTCATGAGAGACAGGCANTTTGGACTAAATATGATGTGTTGTATGGATATGTGT
 7.13 LysVillysAssiloAsp LeaffysEhelysIleIleValThrAlaTyrTysAspLeaFt 732
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NJH-MGC http://mgc.nei.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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 964 IATATAANNATTOOTATAAOTOGRANOOTTTOATGOAAGGAAGAOTGAAAAAAAATA 1020
 752 llelleVal.----PheTyrAsmSerValPheMetGlnArgLeuLysThrAsnile 768
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 46# Leasserlied)nAsaPheSerLysLeaLeaAsaAspAsalle PheHisMet Ser-LeaL 487
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 135 LeutyschulleAspIhrSerThrLysValAspAsnAlaMetSerArgLeuLeuLysLys 154
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 174 uthrotinProSerSerSerTleSerThrGlufTleAsisSerAlaLcutysValSe 194
 38 CIPOSSAGI AA ITGA FACHACCAAAS I IGA I AA I GCI ATGI CAAGACI GT I GAAGAAG 97
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 254 qArqGlyGlnAsnAraSerAlaAr4IleAlaLystHttevGluAsnAspTlnAr4IleIl 274
 398 GCGAGGTCAGAACAGGAGTGCACGGATAGAAAAATAGAAAATGATACAAGAATTAT 457
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 194 rTrpIleThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspKeuValll 214
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 413 uSerileLeutysArg-----VallysAspiledlyfyrile
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 Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DRF7); Fmail s.wiemann9dkfz+ heidelberg.dd; sequenced by DRF7 (German Cancer Research Center,
 Please contact the REMP. Resource.nachtrum, Heubmerweg 6, 14059
Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
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 *** AsaftrieufysGluArqLeuLeusergluHisProGluLeuGluHisileIleTrpThr #82
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 182 ATTATGATGTCATGTATGGCATATGCAAAGTGAAGAATATAGACGTTAAAITGAAA 241
 (82 IIGAICAAASAASAAGAGATATGATTCTATTATAGTATTCTAIAACTGGGTCTTCATGCAG 361
 This clone (DKFZp31300816) is available at the RZPD in Berlin.
Max-Planck-Institute for Molecular Genetics
thnestrasse 73, 14195 Hotlin, Germany
Tel: 49-30-84131623
 Email: poustka@mpimq-berlin-dahlem.mpg.de
This is the 5' sequence of the clone insert
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 eDNA Library Freparation. Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by. Apendout Bioscience Corporation (Clone distribution, MCC clone distribution information can be tound through the L.M.A.G.E. Consortium/LLNL at:
 482 AACAICIAIAIIICAGCCCIGAAGAGICCAIAIAAAAIIICAGAAGGICIGCCAACACA
 157 ValleuPheAlaLeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThrGln 176
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 401 CACAACACCACCCALCCALACCAAAACAACTACAAAATGATACAACAA LTATTGAAGTT 360
 277 LeadystyschaftschadysAsmiloAsp@loVallysAsmVallyrPhotysAsmPhe 296
 461 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 420
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 337 LegAspHisAspLysThrLegGluThrAspSerileAspSerPheGluThrGlnArgThr 356
 541 ILOGATCATGATAAAACICTICAGACIGATICIAIAGACAGITTIGAAAACAGAGAAGA 600
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 396 oSerGluAsnLeulle-SerlyrPheAsnAsnCysThrValAsn---ProLysGluSerl 415
 NIH MGG http://mweluci.nih.gov/. Nalional institutes of Health, Mammalian Gene Collection (MGC)
1 GTATTGTTTGCAA'TGTTCAGCAAATTGGAAAGGACATGTGAACITATATATTTGACACAA 60
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Email: cqapbs r'mail.nih.qov Tissue Procurement: ATCC/DCTD/DTP

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Site_2: SalI; Cloned unidirectionally. Primer: oligo dI.
 507
eDNA Library Preparation: Life Technologies, Inc., CDNA Library Arrayed by: The L.M.A.S.E. Consortium (LLNL) NNA Sequencing by: Apprecent Bioscience Corporation (Clone distribution: MCC clone distribution; MCC clone distribution intermation can be found through the L.M.A.G.E. Consortium/LLNL at:
 590 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro 609
 187
 510 ValArgSerProLysLysLysLySClySerThrThrArgValAsmSerThrAlaAsmAlaGlu 629
 247
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 16.7
 428 AATIGAGTIATIGAAGTICATIGAGAGAGAGAGTITTGGAGTAAATTATGALGTGTTCCATGTAT 487
 488 GGCATATGCAAAGTGAAGATATAGACCTTAAATTCAAAATGATTGTAACAGCATACAAG 547
 730 AspicemProHisAlaValSinGluThrPheiysArgValLeuTletysGluGluGurfyr 749
 679 TeaserClubisptoClubanslubis Heilettettpihnbanshesinbis Ihrteucht
 550 LeuGluArqCysCluHisArqlleMetGluSerLeuAlalrpLeuSerAspSerProLeu
 570 PheAspLeuIleLysGlnSerLysAspArqGluGlyProThrAspHisLeuGluSerAla
 188 GIAAGATCTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTCTACTGCAAATGGAGAG
 630 ThrGlnAlaThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerLeu
 550 PheTyrLysLysVallyrArgLeuAlaTyrLeuArgleuAsnThrLeuCysGluArgLeu
 590 AsnGluTyrGluLeuMetAraAspArqHisLeuAspGluileMetMetCysSerMetTyr
 710 GlylleCystysValtysAsnileAspLeutysPhelyclleTleValthrAluTyrLys
 1 others
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Mismatches:
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BM450031 1023 bp mRNA linear EST 05-FEB-2002
APPNOUNT FRRESHAM NEW MRN, 72 Home Sapiens obuA close IMAGE 5528037
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//note="Organ: skin; Vector: pGMV-SPORT6; Site_1; Not1;
//note="Organ: skin; Vector: pGMV-SPORT6; Site_1; Oligo dT.
//site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
//site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
 Eukaryota: Metazoa, Chordata, Cramiata, Vertebrata; Euteleostomi; Mammalia: Eutheria: Primates: Catarrhini Hominidae, Homo. 1 (bases 1 to 1023) NIE Most hitp: Vanor no! sil: anv/NIE Most hitp: Vanor no! sil: anv/NIE Most hitp: Vanor no! sil: Anv/NIE Most institutes of Health, Mammalian Gene Collection (MGC)
 lissue Procurement: Arcc/úclb/DTP
cDNA Library Propinties Tife Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.B. Consortium (LLNL)
DNA Sequencing by. Agencourt Bloscience Corporation
Clone distribution: MRC clone distribution information can be
found through the I.M.A.G.B. Consortium/LLNL at:
750 AspSerIleIleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 769
 370 dintyralaserthrangerolto ThriceuSerProffeBroHisile-ProArgSe 788
 168 CAGIAIGCIICCACCAGGCCCCCIACCEIGICACCAANFACCICACATITCCICCAAG 727
 748 rPro[yr].ys---PheProSerSerProLeu---ArgllePro---GlyGlyAsn---- 803
 7.28 AMOCTIACAAGTTITECOPPACT PPCACOOPFTACGGAAFTECOFGGGAAGGAACCAPCC 787
 73.5 (grsva.t.gsasm.teasp.com.gst?l.c.t.eva.Thrala_grt/gsaspl.c.pro 73.2 (ff.c.f) (ff.f) (ff.f) (ff.f) (ff.f)
 752 HisAlaValGlnGluThrPhALysArgValLeuIleLysGluGluGluGluTyrAspSerIle 752
 2 AAAGIGAAGAATAIAGAGGITAAATTGAAAAIGATTGTAACAGGATACAAGGATGTTGCT 61
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Mismatches:
 http://image.lini.gov
Plate: LLAM12204 row: 4 column 22
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 Length:
 Indels:
 Contact: Robert Strausberg, Ph.D. Email: cqapbs-r@mail.nih.gov
 /organism "Home sapiens"
/db_vrof "tavon.9606"
 08-04-026-459A-51 (1-928) x BM450031 (1-1023)
 High quality sequence stop: 643
 Location/Qualitiers
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 854 -IleTyrileSerProLeuLys 810
 788 IAIAIIIIICAACCCCCIGGAA 809
 HM450031.1 GI:18499071
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AIG46038 B32 bp mRNA linear EST 25-APR-1999-894 MAY6410,1 SOBRES_mammary_aland_MNLES MR muschins CDNA clone IMARE 1947610 3' similar to ab:MF5391 Mouse relinoblastoma susceptibility protein (MOUSE); mRNA sequence.
 Mus musculus
Pakaiyota, Metazaa, Cherdata, Craniata, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia, Sciurognathi; Muridae; Musinae; Mus
 This clone was previously sequenced on the 5' end only, this new data is from the 3' end
 1 (bases 1 to 832)
MCL GMAF http://www.ncbl.nim.nih.gov/nchegap.
National Cancer Institute, Cancer Genome Anatomy Project (GGAP),
 This clone is available royalty free through LLNL, contact the IMAGE Consortium (info@image.llnl.gov) for lurther information.
 753 IlevalPheTyrAsnSerValPheMetGlnArgleuLysThrAsnIleLeuGlnHyrAla 772
 122 ATAGTATTCTAIAACTCGGTCTTCAIGCAGAGCTGAAAACAAATATTTTGCAGTAIG(I 181
 813 Tyrigs HeserGluGlyLeaproThrProThrLysMetThrProArgSerArgHel.cu 832
 542 GGAGAGTOGAATTTOAGCAGAACTGGCAGAATGAGTTGTAGTOGAAGAGAGATGGA 601
 773 SerThrArgProProThrLeuSerProIleProHisIleProArgSerProTyrLysPhe
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 893 Gly334SertysPhe31s31s1ysTeaAlact.Met312Sert1zAct11aAct615.
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 Possible reversed clone: polyF not found
 Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
 High quality sequence stop: 482.
 Email: cgapbs-rêmail.nih.gov
 Location/Qualifiers
 A:646038
A:646038.1 CI:4724513
 .832
 house mouse.
 MGI:661298
 source
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721 AGCCCTCTGATAGCAAACTAGA-AATGATACGATGATTATGGGGTGTTT CTCTGTAA 7777

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/lab_host "DHIOH"

Action = Verior: PITTUP-Bac (Pharmacia) with a modified footbacker; Ist strand CDNA was prepared from mammary gland fissue from a lactating female, and was then primed with a Not 1 - Oisgo(di) primer. Double-stranded cDNA was lighted to Eco RI adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco RI sites of the modified pITTT vector. Library is normalized, Library was constrained by Rentic Seares and M. Estima Bonaido. "
 200 JouAlaLysGlyGluValLeuGlnMetGluAspAspLouVallleSerPheGlnLeuMet 219
 220 LeurysValleuAspTyrPhelleLysLeuSorProProMotLeuLeuLysGluPrcTyr 239
 100 GlyIleCysilePheileAlaAlaValAspLeuGlyAspMetSerPheThrPheThrGlu 119
 120 tendinlysAsmileChalleSerValHisLysPhePheAsmLenLenLysGluilleAsp 139
 65 ACTAGLAGCAAGGIIGATAAIGCIAIGICAAGACIATIGAAGAAGIATAAIGIGTTAIGT 421
 150 AlakeubhesertystendinArqThrCysGlubeuIleTyrLeuThrGlnProSerSer 179
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 182 GCGTTATCTAGTGAAATAAATTCTATGTTGGGTAAAAATTTCTTGGATGACTTTNTTA 541
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 661 ANAACAGWITGVAFFTCCATTAATGGWITCACCTGGAACACCCAGAAGAAGTCAGAACANG 720
 260 SerAlaArgileAlaLgSClnLeuGluAsnASp1hrArgileIleGluValLeuCysLys 279
 122 TTATGTCAAAAGTTAAAGGTACCCGATCATGTCAGAGAAAGAGCTTGGCTAACTTGGGAG 181
 60 Leutyschiffsterutzstleft. OAspRisValArgGluArgAlaftplathrfrpGlu 79
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 Conservative:
 Mismatches:
/tissue type "mammary qland"
 Matches:
 Indels:
Gaps:
 Length:
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Afab_nost_trained profits by the following property of the following profits by the following property is strand chan was prepared from mammary add and tissue from a lactating benealer, and was then primed add to Eco RI adaptors (Pharmacia), disciple stranded chan was ligated to Eco RI adaptors (Pharmacia), disciple with Not and cloned into the Not I and Eco RI sites of the modified pyT31 vector. Library as normalized, Library mas constructed by Bento Soares and M. Farima Bonaldo. ** a 178 c. ** a 261 t.** in thers.**
 1 (bases 1 to 914)
Marra,M., Hiller,L., Allen,M., Bowles,M., Diettroh,N., Dubuque,T.,
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Stoptow,M., Jan,F., Underwood,K., Monre,B.,
Theising,B., Wylle,L., Leunon,G., Soares,H., Wilson,K. and
 EST 27 JAN 1998
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Bukaryeta, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
 vw54a04.rl Scares_mammary_dland_NMLMS Mus_nus_cllus_cDNA_clone=
IMAGE.1247598 5' similar to qb.M15406 RETINGGLASTOMA_ASSOCIATED
PROTEIN_(HUMAN); gb:M2639] Mouse retinoblastoma_susceptibility
 This clone is available royalty-free through H.Nn., contact the IMAGE Consortium (info*image.llnL.gov) for further information.
 HITHTHII ::: HITHI::: HITHER HIT HI HITHIAAABAAAAA 857
 336 PheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGluAiq 499
280 GludisGluCysAsnileAspCluValigoAouValTyrDactycAouElectro 298 HILLIHH (HILLIHHHILL) :: HISS HILLIH
 . 778 GAACACGAGIG-AATATAGAIGAGAA--AIGITATITCAAAAATIATCCI 840
 4444 Forest Park ParkWay, Box 8501, St. Louis, Mc 63108
 /clone_lib-"Soares_mammary_aland_NMLMG"
/sex="temale (lactatind)"
 WashU-HHMI Mouse EST Project
Washington University School of Medicinep
 Seq primer: -28ml* rev2 ET from Amersham High quality sequence stop: 422. Location/Qualitiers
 Conservative:
Mismatches:
 RENA
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 Contact: Marra M/Mouse EST Project.
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 The WashU-HHMI Mouse EST Project Unpublished (1996)
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1056.50
82.14%
75.97%
 22.028
 Tel: 314 286 1800
Fax: 314 286 1810
 914
 Mus musculus
 house mouse.
 Waterston, R.
 Best Local Similarity:
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 Percent Similarity.
 Alignment Scores:
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 Boxon Sapiena
Boxaryota, Metazoa, Chordata, Craniata; Vertebrata, Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini, Hosfnidac, Homo.
 (55 ThrProArgLysSerAsnLeuAspGluGluValAsnVallTeProProHisThrProVal 375
 75 ArgibrValMetAsnihrileGinGinGametMetileLeuAsnSerAlaSerAspGin 395
 197 I GOOCIGII I IGGAACCIATCCAACAATTTAITGIGA FITTTAAACTCGGGCAATGACGG 738
 4.6 ProSerGlaAsnLealleSerTyrPhcAsnAsnCysThrValAsnFrcLysGluSerIle 415
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 476 LouizouAsnAspAsnIlePheHisMetSerLeuieuAlaCysAlaLeuGluValValMet 495
 496 AlaihriyrSerArgSerThrSerClnAsnLeuAspSerClyThrAspLeuSerPhePro 515
 556 ArqilleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeurlleLysGln 575
 576 SerLysAspArgGluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuPro 595
 196 (cudlasnasnHisThralaAlaAspMetTyrLouSerProValargSerProlysLys 615)
 +16 LysGiyserThrThrArgValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 635
 .45 CICCAGGGTAAFFATAFFAFAFATATGTATGTTTTFTGTFTAAGATGICCAAAGAAA 86
 #3# PheGlnThrGlnLysProLeuLys 643
 25 TIGGATACTCAGAAGCCATTIGAAA 2
 AL563757.1 G1:12913464
 prime, mRNA sequence.
A1563757
 human.
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Anote "Organ, brain, vector, polystoni 6, ist strand than was primed with a NotL-olygo(d) primer. Five prime end enriched, double-stranded shaw was disperted with Not Landeloned into the Not Land For By sies of the polystonic vector. Library was normalized. Library was constructed by Lite Technologies. Contact, Feng Liand Lite Technologies, Contact, Feng Liand Lite Technologies, a fixing Lite Technologies, of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301 610
 300 MetAsnSerLeuGlyLeuValThrSerAsnGlyLeuProGluValGluAsnLeuSerLys 419
 791 AAAACAGCTKTTATAGCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTGAGACAGG 732
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 551 CGATACGAAGAAATTTTTTTTAAAAATAAAGATCTAGATGCAAGAITAITITIGGWICAT 492
 (80 AsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspGlnProserGluAsn 399
 460 i.euileSerTyrPheAsnAsnCysThrValAshProLysCluSerHeineulysArgVal 419
 280 CluffsCluCysAsnIleAspCluValLysAstValTyrFhcLysAsnihcHeffeffefte
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 Email: segref?genescope.ens.fr, Web : www.genoscope.ens.fr
 26 others
 Li, W.R., Gruber, C., Jessee, J. and Polayes, D. Full-length cDNA libraries and normalization copublished (2001)
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148 c 117 g 255 1 26
 Genoscope - Centre National de Sequencade
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 Location/Qualifiers
 8.66-94
1043.00
84.538
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1 (bases 1 to 792)
 Contact Genescope
 Ferget Similarity:
Best Local Similarity:
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 605 bp mRNA linear EST 14-AUG-2001
DKF2p43P992 57, mKNA Sequence.
AES99634
 clone from S. Witchmann, Molecular Genome Analysis, German Cancer Seconder Center (UME2): Email s.witemann@Mklz.heidelberg.de: sequenced by BAEZ (Biomedical Research Center at the Charit. Betlin/Germanny) within the CDNA sequencing consertion of the German
 Eukaryola: Metazoa: Chordata; Craniata; Verrebrata; Buteleostomi;
Mammalia: Futberia: Primates; Catarchini; Hominidae; Homo.
 Zhoto-"Voetor: pTriplEX2; Site_1: STiIA; Site_2: STiIH; cDNA collection"
 Please contact the RZPD: Ressourcententing, Heibnerweg 6, 14059 Heilin Charlottenburg, GERMANY; Email: clonewizpd.de.
FSI (Koobnor, K., Reyer, A., Mewes, H.W., Weil, B. and Wiemann, S.)
Unpublished (1999)
Contact: Koehrer K.
 42º LysAspil+GlyTyril+PheLysGluLysPheAlaLysAlaValGly31sGlyCysVal 439
 440 GluffedlySerdlnArdfyrLyStæuGly--ValArqteufyrTyrArqValMetGluS 459
 191 GAAATTGGATCACAGGGAFACAAAGTTGGTTGTTTGGCTTGTATTACGAGTAATGGAAT 132
 459 er Met Leutys Ser Gludludtudt at Leutser i Leg in Asnehe Ser Lysteuteut Asne 478
 479 AspAsiillePheHisMetSerLeuLeuAlaCySAlaLeuGluValValWetAlaThrTyr 498
 No sl sequence available.
This clone (DEST TITOGS) is realiable at the EZP: in Berlin

 (bases 1 to 60%)
 Kochrer,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.

 Am Klopterspitz 18a D 82152 Martinsried, Germany
This is the 5' sequence of the clone insert
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Mismatches:
Indels:
 Matches:
 Length:
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/db_xrot="taxon:9606"
 Gaps:
 /clone-"DKFZp 41 4P092"
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 Location/Qualitiers
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 Genome Project
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Best Local Similarity:
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 Nagai, M.A., da Silva, W. Jr., Zaqo, M.A., Hordin, R., Posta, F.F., Coldano, C.H., Carvelho, A.F., Matsukhua, A., Kara, C.S., Silmsen, D.H., Brunstein, A., de Goll verlax, F.S., Hurcher, P., Jongeneck, C.V., O'Haro, M.J., Soares, F., Brentani, R.K., Reis, L.F., de Soaza, S.J. and
 Dias Neto, E., García Correa, R., Verjovski Almeida, S., Briones, M.R.,
 BEOB2846
FC2 HIG642 210200 014 c06 BIO642 Home sapiets c064, meNA sequence.
 Enkaryota; Metazoa; Chordata; Chamiata; Mortebrata; Inteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1. (bases 1-to-694)
 Laboratory of Cancer Genetics
Endwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010. Sac Paulo SP.
 Shotgun sequencing of the human transcriptome with odd expressed
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 395 GluProSerGluAsilealleSerTyrFheAsidNsnVvsThrValAsiProDysGluSer 414
 421 ATACTGAAAAGAGTGAAGGATATAGGATACATCTTTAAAGAGAATTTG/TAAAG/TGTG 480
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 Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
US-09-026-459A-51 (1-928) x AL599633 (1-605)
 Contact: Simpson A.J.G.
 BE082846.1 GI:8474151
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 Simpson, A.J.
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EST 13-MAR-2002

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Melton, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D., Mylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, R., Ritter, Wylie, T., Martin, J., Cardonas, M., Siklons, M., Monett, J., Morett, J., Cardonas, M., Siklons, M., Monett, J., Markets, V., Williams, F., Jackson, Y., and Howers, Y.
 Libratics were constructed by Dr. Douglas Melton DNA sequencing by, Washington University Schome Sequencing Center For information on obtaining a clone please contact; Juliana Brown
 Harvard University, Howard Hughes Medical Institute Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge.
 /note-"Organ: Pancreas; Vector: pSPORIT; Site_1: Not 1:
Site_2: Sal 1: Inbrary constructed using SuperScript
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Mammalia, Eutheria, Primates, Catarfhini, Hominidae: Homo.
 This sequence now available from the IMAGE consortium, for clone orders contact: info@image.llnl.gov
 iallh09.yl Buman Pancreatic Islets Homo sapiens cDNA clone-IMAGE:588049 5. similar to gb:M15400 RELINGHLASIOMA ASSUCTATED PROPERT (MOHEN); gb:M26.99 Mouse retinoblasioma susceptibility profein (MOHEN); mmnA sequence, retinoblasioma susceptibility AM584181.
 271 ThrArgileileGluValLeuGystysCluHisGluCysAsmileAspCluValLysAsm 290
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Contact: Douglas Melton, Klaus H. Kaestner, s Hiroshi Inoue
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 Email: dmelton@biohp.harvard.edu
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 into the put 18 vector Beverse transcription of tissue mRNA and cDNA amplification were performed under low
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Eukaryota, Motazoa, Chordata, Craniala, Vortebrata, Euteleosfomi,
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 vw>4hol.rl Soares_mammary_gland_NMLMG Mus muserlys cDNA clone
lMAGE:1247665 5' similar to qb:M15400 RETINORLASIOMA-ASSOCIATED
PROTEIN (HOMAN); qb:M26391 Mouse retinoblastoma susceptibility
 ttu ytemProdinValGluAsntenSertysArqfyrGluGlufrettyrLentysAsntysAs 330
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 4.39 eAlatysAlaVatG1yG1aG1yCysVa1G1u14cG1ySetG1aAryTyrtysLcuG1yVa 450
 483 TOCIAAAGTUGGGACAGGIIGIGIGGAAATTTGATCACAGGGATACAACTTGGAGT 542
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 410 nProLysaluSerIleLeutysArqValLysAspIleGlyTyrIleEhrLysGluLysPh 435
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 4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
 Washington University School of MedicineP
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 Contact: Marra M/Mouse ESI Project
 Email: mouseest watson.wustl.edu
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Anote Vector, pi2180 Far (Pharmacia) with a modified polylinker; 1st strend eTNA was prepared from mammary polylinker; 1st strend eTNA was prepared from mammary polylinker; Issue from a lactating tendale, and was then primed with a Not I — Oliqu(dT) primer, footble stranded eTNA was ligated to ECO RI adaptors (Pharmacia), digested with Not and cloned into the Not and ECO RI sites of the
 modified p1713 Vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Bonaldo." 172 c 204 a 251 t 2 others
 375 alArqThrValMetAsnThrTleGlnGlnLeuMetMetIleLeuAsnSerAluSerAspG 195
 803 TIGG-GCCGITITIGAIACIACICCACCATIAGGGGGGITITIAATILCCCCAAGIATCA 745
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 415 leLeatysArqValLysAsfileGlyTyrileFh@LysGlaLysFhrAlaLysAlaValG 435
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 455 rgValMetGluSerMetLeuLysSerGluGluGluArgleuSerlleGluAshPheserl. 475
 475 ysteuteuAsnAspAssilePheHisMetsevteileuAladysAlateushuValValM 495
 495 et AlaThrTyrSerArdSerThrSerGinAshLeaAspSerGlyThrAspLonSerPhoP 515
 444 TGGCTACGTATAGCAGAAGTACATIGGAG AIGIIGALICIGGAACAGALILGIGGTTCC 385
 515 roTrp11clcuAsnValleuAsnLeutysAlaPheAspPhetyrtysValtTe31uSerp 545
 884 CGTGGATTCTGAACGTACTTAAATTTAAAAGCCTTTGATTTTACAAAGTGATTGAAAGTT 425
 535 helleLysAlaGluGlyAssEEerThrArqGlaMet HeLysHisLeugluAraCyssHuH 555
 IMAGE Consortium (infolimage.linl.gov) for turther information
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(Without alignments) 18469,506 Million cell updates/sec

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1 CGCGTCATGCCGCCCAAAAC. Sequences

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16154066 seqs, 8097743376 residues Seatterfield: 12308132 total number of hits satisfying chosen parameters:

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Listing first 45 summaries

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### SHIMMARIES

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### ALIGNMENTS

RESULT 1

AK911246 HIC 19 JAN 2002 Mus musculus 10 days embryo whole body cDNA, RIKEN IIII benuth enriched library, clone:2600077Mz2:retinoblastoma 1, Fill insert HTC: CAP trapper. Mass musculus (strain:C57HL/6J) lo days embryo chwa to mkwa, chone Librarkan tuli-length enriched mouse chwa library chone:2603017M22. AK011246 AK011246.1 GF:12847243 sequence. DEFINITION ORGANISM ACCESSION KEYWORDS AK 0 1 1 2 4 6 VERSION COCUS

Mammalia; Eutheria: Rodentia; Sciuroquathi; Muridae; Murinae; Mus Bukaryota, Metazoa, Chordata, Craniata, Verfebrata, Eureleostomi, Mus musculus

Carninci,P. and Hayashizaki,Y. Mith etticiency full-length cLNA cloning Meth. Enzymol. 303, 19-44 (1999) 94279254 REFERENCE AUTHORS JOURNAL MEDLINE

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PURMED REFERENCE

Carninci, P., Shibata, Y., Hayatsu, N., Susahata, Y., Shibata, K., Itoh, M., Konno, H., Gazaki, Y., Murabuisu, M. and Hayashizaki, Y., Normalization and subtraction of cap trapper selected connas to Genome full-length conna libratics for rapid discovery of new genes Genome Res. 10 (10), 1617-1630 (2000) MEDLINE PUBMED AUTHORS JOHENAL TITLE

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Adachill. Alzawa K. Akahira.S., Akimura.T., Akdo.H. Ardi.A.,
Arakawa.T., Baldarelli,R., Bono,H., Brownstein,M., Bult,C.,
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 Submitted (10 JUL 2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Fescarch (FEKEN). Laboratory for Cenomic Exportation Besearch Group, RIKEN Genomic Sciences Center (GSC), PIFEN VAKAHRA INSTITUTE 22 Submire-cho. Trainmisku. Yokohama. Kanaqawa 230-0045, Japan (E-mail-genome-resider riken go.jp.
 cDNA library was prepared and sequenced in Mouse Genomie incyclopedala Project of Genome Exploration Research Group in Piken Genomic Sciences Center and Genome Science Laboratory in FIKEN DIVISION of Experimental Animal Research in Piken contributed to
 Fax:81-45-503-9216)
Please Visit our Web site (http://genome gse riken ge jp/) for
 Technic 180 (Theo go) J.Z. Tel-81-45-503-5222.
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Itoh M _ Aizawa_K
 Direct Submission
 further details.
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 1117 CCACACACTCCAGITAGGACTGITATGAACACIATCGAACAATTAATGATTTAAAT 1176
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 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cqapbs://mail.nih.gov
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 cDNA Library Preparation. Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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Clone distribution: MGC clone distribution information can be
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221 TAACITIGGAAGIIGIGIIIAIGGAAAAAAIAHATAAIAHTIAAGAIATETHAGAATAT 286
 241 AAAAIGISCAGATGCAAFFGFFFFFGGGFGAFFCCCTAAGCCACFFGAAAFGGFAGTCAFF 840
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Email: cgapbs:r*mail.nih.gov
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 (0.16) FGCGATITAAAAAGITGIAAGAATIGIITGCTCTTCCAAAGTAAAATTGCTGTGTTTA 3075
 ROTE TOWATANTAANAA DOPPOTTANAAN GOGAGTEETAAGCCAGGPOTG FORACHEETAA 3135
 2776 AACAAGGAAAAATGAGGATCTCAAGGACTTGGTGGACACTGTGTACACCTCTGGATT 2835
 2896 ATAICHTCAGCTCHTHGLGGGALAIAAAAIGTGGAGATGCAATFGTTFGGGTGATTGCT 2955
1 (bases 1 to 1081)
NIH-MGC http://mgc nci mih qoz/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 LMA Sequencing by: Agencourt Bioscience Corporation
Close distribution: MGC clone distribution information can be
bound through the L.M.A.G.E. Consortium/LLML at:
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 chNA Library Preparation: Life Technologies, Inc. chNA Library Arrayed by: The L.M.A.G.E. Consertium (HLNL)
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 Note: this is a NIH_MGC Library."
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 Contact: Kobert Strausberg, Ph.D.
Email: eqapbs=r'mail.nih.gov
Tissae Procurement: ATCC
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Email: cgapbs-remail.nth.gov
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 HUR TAGAAAA I WA FACAAGAATI TATIFGAAGAI TATAAAAAAAAAAAAA TAAAATATAAATG 1865
 REK AGGTGAAAAATGTTTATTTGAAAATTTTATAGGTTTTTATGAAATTC1C1TGGACTTGTAA 925
 28 CATCIAAIGGACTICCAGAGGTIGAAAATCTTICIAAACGAIAAGGAAATIIAICIIA 985
 4-1 OATGIAAIGBAATTFFPARAFTFGAAAATFTTTFTAAAAFGATAFGAAAAAATTTATGITA 340
 661 AAAATAAAGATCIAGATGCAAGATTATTTTGGATGATGATAAAACTCTTCAGACTGATT 420
 481 ATGTAATTOOTOCACACACTOCAGITAGGAATGTTATGAACACTGTOTATCAACAATAAYGA 540
 541 IGATITIAAATICAAAAAGAAIGAICAAAAAAAAAICIGAITICGIATITIAACAAAT 600
 686 TTAAACTCTCACCTCCATGTTGCTCAAAGAACCAIAIAAAAACAGCTGTTATACCCATTA 745
 4464 ATTROOGTGCGCTCTTGAGGITGTAATGGCCACATAIAGC 1503
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1 (bases 1 to 1001) NIE MAC http://mgc.nci.nih.aov/. National Institutes of Health, Mammalian Gene Collection (MGC)

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/rote-Torgan, testis, Vector, pCMV SPORI6; Site_1: Not1; Site_2: Sall; Cloned unidirectionally; Oliqo-dI primed. Average insert size 2.5 kb. Library enriched for tull-length clones and constructed by Life Technologies. Note: this is a NIH_MGC_Library."
 CDNA Library Preparation, Life Technologies, Inc.
CDNA Library Arrayed by: The T m A G F Consortism (LLML)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov.maw.f rolumn 04
 953 ATCLITCHAAACGATACGAAGAAFFFALCH AAAALAAAGALCFAGAF9CAAGAFFIAL TUTZ
 414 AGAAATIGATACCAGTACCAAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 473
 43 AGTAATTGATAGCAGTAGCAAAAGTTGAJAAJGGTAIGJCAAGACIGJTGAAGAGIATGA 102
 463 PPOTOTOTAMAGAAGAACATGAATGTAATATAGATGAGGTGAAAAALCTTTATTTCAAAAALTF 522
 58 ATCHICLAMACGAIACGAAGAAATTIATCTIAAAAATAAAAICHAGALCHAGALCOAAGAHAH 542
 5/3 AMPERANTIPOATAPITATISAAAIAAAITEIGGATGGGGGGTAAAAGTTTGGGA 592
 163 ARTOTASTROGATATOTACTSAAATAAATTOICCATTGGTGGTAAAAGTTTGTTSGA 222
 593 TCACATTTTTATTAGCTAAAAGGGGAAGTAFTAGAAATGGAAGAFGATCIGGTGATTICAL E5z
 653 TTCAGTTAAFGCTATGTGTCGTTGACTATTTATTAACTCTCACCTCCCATGTTGCTCA 712
 713 AAGAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACACCAGGGAG 772
 773 CTCAGAAGAGGGGGGGGGGATAGGAAAGAAGIAGAAATGAIAGAAGAAGAAG 832
 833 TICICICIANAGANGANGANGANGTAATATATAGATGAGGIGAAAAANGTITATITCAAAAAIT 892
 474 IGIAIIGIIIGOACICICAGCAAAII-GGAAAGGACATGIGAACITAIAITITGACAC
 223 TCACATTTTATTACCTAAAGGGGAAGTATTACAAATGGAAGATGATCTGCTGATTTCAT
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/Lissue_type="embryonal carcinoma, cell line"
 22.1%; Score 786; DB 13; Length 1201; 95.1%; Pred. No. 1.1e-143; Live 0; Mismatches 40; Indels 3
 /lab_host~"DH10B (phage-resistant)"
 288 t
 "crganism-"Homo sapiens"
 High quality sequence start: 17
High quality sequence stop: 734.
 /clone-"IMAGE:5575683"
 /db_xref-"taxon:9606"
 Contact: Robert Strausberg, P
Email: cgapbs-r@mail.nih.gov
 Location/Qualitiers
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 Pissue Procurement; ATCC
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Unpublished (1999)
 Matches 833; Conservative
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Zhole Torquii ovary (pool of 3); Vector; pCMV-SPORT6:
Site I: Beak (destroyed), Site_2: Neif; bNA source pool
of three ovaries, from remarks ranging in age from 38 to
49 yo. Library is often diprimed and directionally cloned
(Booky site is destroyed upon cloning). Average insert
size 2 l.k., insert size range 1-3.5 kb. Library is
committed and enriched for full length clones and was
constructed by G. Staber (Inviteden). Research Gegetics
tracking rode 036.
 НИS45881 10-03 20-PEH-2002 AGENY (505)83 NIH_MGC_125 Homo sapiens characteric IMAGE:5588245
 Eukaryoja; Metazoa; Chordata; Craniata; Verrebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1122)
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 1194 CHICAGAAAARCIGAHH -CGIAHHIAACAACHGCACAGAAFFAAAAAGKAT 1250
 1133 OGANTGITATGAAGAGTATOYAAGAATTAATGATTTAAATTOAGGAAGTGATGAAG 1192
 64 - ITTIGGATOATGAAAAACTOTTGAGACTGATTGTATAGACAGTTTTGAAAGAGAA 702
 76.4. GGACTGTTATGAAGACTATCCAACAATTAATGATGTTTTAAATTGAGGAAGTGATGAAC 1822
 cDNA Library Preparation: Lite Technologies, Inc. clnA Library Arrayed by: The L.M.A.G.F. Consortium (LLNL.) DNA Sequencing by: Agencourt Brossince Corporation Clone distribution: MGC clone distribution information can be
 #24 OTTOAAAAATOOGATIIFOOTATTITAAGAAGTGGAGGGTGAAATOOGAAAAGAAAGC 882
 National institutes of Health, Mammalian Gene Collection (MGC)
 wherey Match 21.2%; Score 25.2.4; 58-14; Longih 1122; Rest Local Similarity 25.6%; Pred. No. 4.2e-137;
 2 others
 Tound through the I.M.A.G.E. Consortium/LENE at: http://image.llnl.gov
 1251 ACTGAAAAGAGTGAAGGAFAFAGAFAGAFAGATGTTTAA 1286
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 Plate: LLAM12459 row: a column: 14
 Contact: Robert Strausberg, Ph.D.
 /orqanism-"Homo sapiens"
/db_xret "taxon:9606"
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Zlab, bost ="DH10H"
 High quality sequence start: 48
High quality sequence stop: 773.
 Zelone "IMAGE:5588245"
 NIH MGC http://mgc.nci.nih.gov/
 Email: cgapbs r'mail.nib.gov
Tissue Procurement: Invitrogen
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Mammalia, Eutheria, Primates, Cataribini, Hominidae, Homo.
1 (bases 1 to 727)
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 2881 Trangecaeattiaalaletieagetetiiissseatatateegaaate 2940
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 2761 AGCATGGATACCTCAAACAAGGAAGAAAATGAGGATCTCAGGACTTGGTGGACACTGT 2820
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 3061 AATTGMGGTFLATGGATAGTAAGAATGGGGMTAGGAGTGGGAGTGCGGAATAAGGAGG 3120
 3238 TCTATCTTCCAAAIGCAAITTGAFTGACTGCCAFTCACCAAAATIATCTTGAACTGFFC 3297
 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAATTACTAATTTTACATTAGATTI +456
 540 GTACACCTCTGATTCATECTCTCACAGAGATGTGACLGIAIAGGIIICO AGGIL IGE 599
 719
 780 AATTGCTGTTTTATGGATAGTAAGAATGGCCCTAGAGTGCTGATAAGTGAGT 839
 899 TAATITATAATGGATATITITITATATTAACATGAANCACCTTAGAAAATGTGTTATA 958
 BKF2.615 06816_11 01 (Sytocopie, Alexa) Bone supiters obtA clone
DKF2.61 000816 51, mkNA sequence.
 2581 CTCAAAAGAAGTGCTGAAGGAAGCAACCCCCTAAAACCACTGAAAAACTACCCTTTGAT
 2641 ATTGAAGGATCAGATGAAGGAGATGGAAGTAAACATTTCCAGGAGAGTTAAAATTTCAG
 2821 GTACACCICIGGATICALICICTICTICACACATOTALABACTILLICICAGGILLICI
 2941 GTTTGGGTGATTCCTAAGGCACTTGAAATGTTAGTCATTGTTATTATATACAAGATTGAAA
 8001 APCITGEGAATCCFGCGTAFTTAAAAAGTTGTAGAGATTGTFTCTFTLFCAAAAGTAA
 8121 CCTGTCTGACTACTI GOCLICITI GIAGCATALACGICATGITTACTICTITAT
 3181 TAATITTATA - TGTALALITTTTAATTTAACATGAA (CAMMYTTAQAAAA) GTGTOMA
 3357 LATTITACIATTGGAAICTGALAIA 3381
 1078 IAIIIIANIAIIGAAAAASSAAATA 1102
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Poustka.A., Wellenreuther.R., McWes,H.W., Well.B. and Wiemann,S.).
ESI (Poustka.A., Wellenreuther.B., McWes.B.W., Weil.B. and Wiemann
 sequenced by DKFZ (German Cancer Research Center,
Heidelberg/Gersany) within the σΕΝΑ sequencing consurting of the
German Genome Project.
 pTriplEx2, Site_1 SfilA, Site_2 SfilB;
 Fax. 44.10.84131128
Email: poustka umping berlin-dahlem.mpq.de
this is the 5' sequence of the clone insert
Cloue from 8. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DEEY): Imail s.wiemannädkfr heidelberg.de;
 Please contact the Paper Bissinteraction, Busherrang C, 14059
Berlin-Charlettenburg, GPPMANY, Email: clopestryd de
 2412 GAANATOTATATITGAGGGGTGAAGAGTGGATATAAAAITTGAGAAGGTGTGGGGAAGAG 2471
 | +42 | SAAAICIAPCICITICACIGITITAIAAAAAAGIRHFRARARAAATATFORTATOTATATOTAGAGT | 1991
 2 % 2 COTITIONAGEACACAGAGAATGAGIAIGAACICAIGAGAGAGAGAGATTGGACA 2111
 2352 ACMINAMATICGINGAAGGCCHIACAAGINTICCIAGITICACCCTIFAGGGATTICCIIGGAGG 2411
 2112 AATIAIGATGTGTGTTGAAGGTATGGGGATAAAGTGAAGAATATAAGGGTTAAAGTTGAA 2171
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 361 GARANTGAAAANAAATATTTREVARIATREVITERIANIAGOOOGTAGGTIGTCACCAAT 420
 421 ACCTCACATTCCTCGAAGGCCTTACAAGTIICCTAGTICACCCTTACGGAIICCTGGAGG 480
 No si sequence aváilable.
This clone (DKEZp313006C6) is available at the RZPD in Berlin.
Pleaso contact the PTPL Exxamenately., Beyberseg f, 1465
 0; Caps
 1 GAAATGIAGGTGTGTTTGAGTGTTTTATAAAAAAGTGTATGGGGTAGGGTATGTCGGGGT 60
 20.4%; Score 725.4; DP 9; Length 727;
 Indels
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 /cione="DAFZp31300616"
/cione=11b=-313 (synonym: hicc2)"
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/lab_host="PHIOP"
 Pred, No. 8,4e 132;
 lbnestrasse 73, 14195 Reviin, Germany
rel: -49-30-84131623
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 /db xrmf-"tayon.4606"
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Eukaryota: Metadda: Chordata: Craniata: Vertebrata: Enteleustomi:
Mammalia; Eutheria; Primates: Catarrhini; Hominiduc: Homo.
 /note-"Organ: testis: Vector: pCMV-SpOR15; Site_1: Not1; Site_2: Sull, Cloned unidirectionally; oliqued: primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Lite Technologies. Note: this is a NIH_MGC ibrary."
2472 AACAAAAAIGACICCAAGAICAAGAAICITAGIAICAATIGGIGAAICALIGGGGACIIC 2541
 2532 TGAGAAGTTGCAGAAAATAAATGAGATGGTALGTAACAGGGAGGGTGTGCTGAAAAGAAG 2591
 2592 IGCTGAAGGAAGGAAGCCTCCTAAACACTGAAAAAGTAGGTTTGATATTGAAGGATC 2651
 cDNA Library Preparation: Life Technologies, Inc. (CDNA Library Arrayed by. The I.M.A.G.E. Consortion. (LIRI) DNA Sequencing by: Appendout Bioscience Corporation Clone distribution: MGC clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
 National Institutes of Health, Manmalian Gene Collection (MGT) Unpublished (1999)
 475. Graffingtyffyrgoraffotttgagfaaattggaaaggagafig igaactffatata ifftgacacaa. 534
 535 COCAGCAGIICGATACIACIACIGAAAIACIGCATIGGIGGIAAAAGITTCIIGGAIQ 554
 20.3%; Score 720.6; DB 14; Length 880; 98.7%; Pred, No. 7.2e-131;
 /elone_lib "Nim_Mig_92"
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/lab_host="DH10B (phage-resistant," cocost, coco
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 Plate: LAM13279 row: i column: 20
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 /organism-"Homo sapiens"
 Contact, Robert Strausberg, Ph.D.
 /clone="IMAGE:6041563"
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NIH-MGC http://mgc.nci.nih.gov/
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 Dmail: eqapbs r@mail.nib.gov
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HC510551 BY-APR-2001 825 bp mRNA linear EST 18-APR-2001 602611848E1 NIH_MSC_50 HOMO Sapiens CDNA CLONE IMAGE:4737634 5',
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Eukatyota; Metazoa; Chordata; Craniata; Verfebrata; Euteleostomi;
 1135 ACTGLIATGAACACIATCCAACAATFAATGATGATTTTAAATTCAGGAAGTGATCAA-CC 1193
 955 CTITCTAAACGATACGAAGAAFITTATCTTAAAAATAAAGATCTAGATGCAAGAFFAFTF 1014
 HITTELLITELLE FER FOR THE FER
 481 CTITCTAAACGATAGGAAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTT 540
 DNA Sequencing by: Incyte Genamics, Inc.
595 AMALLIHALIAGGIAAAGGSSAAGIALIACAAAIGGAAGAIGAIGIGGIGGALTICALTI 654
 655 CASTIAATGCTAFGIGICTCTIGACTATTTATTAAACTCTGGGGGATGTGGCTCAAA 714
 775 CAGAACAGGAGGAGGAGAGAAGAAGAAGAAAIGATAGAAGATTATTGAAGTT 834
 835 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 894
 M95 ATACCITITIATGAATTCICITGGAACTGGAAGATGTAATGGAATTCCAGAGGTTGAAAAI 954
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 chNA Library Preparation: CLONETECH Laboratories, Inc. chNA Library Arrayed by: the L.M.A.G.E. Consortium (LAUL)
 715 GAACCATAIAAAACAGCIGTIATACOCATIAATGGTTCACCTCCAACACCCAGGCGAGGT
 Mammalia: Butheria: Primates: Catarrhini: Heminidae, Homo.
 tound through the L.M.A.G.E. Consortium/LLNL at:
http://image.llnl.pov
 Plate: LLCM1605 row: o column: 11
 Contact: Robert Strausborg, Ph.D.
 High quality sequence stop: 709.
 1194 TECAGAAAATCTGATTTGCTATTTAA 1220
 721 HEAAAAAAGGGAHIIIOOJAHIIIA 747
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 2682 AGGAGAGTCCAAATTICAGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCA 2741
 042 GITICCICITICCAAAGIAAAATIGCIGGITIAIGGAIAGIAAGAAIGGCCITAAGAAIGGCTAAGAATG 3101
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 282 TTALCTIGAACICTIGGGAAAAIGGAJAITAJJAGAAAII — AGAAAAAAIJAMA 3438
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 601 TTATCCTGAACTCTTCTGCAAAAATGGATATTATTCCGAAAATCACGAAAACAAAATTACTA 660
 541 TAGAAAATGIGIGCIATGIAFGTTGCAAATGGAATTTGAITGAGGGGCCAIFCACAAAA 600
 sden is
 1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGACTTCTACTCGAACACGAATGCA 60
 2802 GGACCTTGGTGGACACTGTSTACACGGALICATISTCTGTCACACTGTA
 181 TAACTTTCCCAGGTTCTGTTTATGGCCACATTTAATATGTTCAGGTCTTTTTGTGGAATAT
 241 AAAATGIGCAGATGCAATIGITIGGGIGATIFOCIAAGCCACTIGAAATGIIAGICAFIGI
 2982 INTITATACAAGATIGAAAAICTIGIGIAAATCCIGCCAITTAAAAAGITGIAGCAAGIT
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 Eukaryota; Merazoa; Chordata; Cramiata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 792)
LLW R. Gruber, Josepe, J. and Polayes, D. Full-length cDNA libraries and normalization USA. Useful 1.55 (2001)
**** AAAAITITAGITTITAATTAAAAAGTGGAAGCAAAGIAIAAGAAIAIAIAIAIAIAIAA 3458
 792 JAAAAGAGETKITPAYAOOGAFTAAHGAGTIGAAAGAGGAAGAGAAGAGAAGAAGAAGA
 183 GAGTSTANGGATANTAANAANAATAANTAHAAATGATATAAAAAIIAIIGAAGITUTTOTGIAA 842
 843 AGAACAIGAAFGTAATATAGATGAGGTGAAAAAFGTTTGAAAAATTTTATACCTTT 902
 933 JATSAALIGICI IGGAGTIGI AACA ICHAATIGGACTI CCAGAGGTITGAAAA ICHTITCIAA 962
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Email: Seqret Genoscope.cus.fr, Web . www.genoscope.cus.fr.
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 , Score 698.2, DB 9; Longth 792, Pred. No. 1.8e-126; C3. Mismatches 23, Indels 3
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/clone="CSODD007YA05"
 117 3
 ALS64757.1 GI:12913464
 prime, mRNA sequence.
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463 ACMATAMMAAATITATMITAAAAAAAAAAATCIAGAAGGGAAGAITAITIIGGATMA 1022

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PG77045e BELL NIH_MGC_77 Homo sapiens CDNA clone IMAGE:4717874 57,
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 /clonc_lib="NiH_MGC_77"
/lab.host="DH10B (I] phage-resistant)"
/note="Organ: lung: Vector: pUNN=LIB (Foutech); Site_l:
SLII (gqccqcctcqqcc): Site_2: SII (qqccqttatqqcc); 5' an
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 1923 TGABAAAAATTTTAAGAGTGATTTTATAGAGGTTTTTGAAAGAGAGAGAGAGAGAGAGAHAAA 1882
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 312 IYIGITITCYIWITITIACGACIGCACAGIGAAICCAAAAGAAAGIAIACIGAAAAGAA 253
 CDNA Library Preparation: CLONIECH Laboratories, Inc. who iterate it is a first arrayed by the LM.A.G.E. Consortium (LLNL) buna Sequencing by: Incyte Genemics, Inc. Clone distribution: MGC clone distribution information can be
 NIH MGT ELLE //FG LGT GET GET A MAMMALLAN Gene Collection (MGC) National Institutes of Health, Mammallan Gene Collection (MGC)
 132 TOTALGITATIOAGAAGAAGGACGAIIALCCAIICAAAAITIIEGCACACIICTGAAI 73
 1203 TOTGALITECTALLITAACAACTGCAGAGTGAATGCAAAAGAAAGTATACTGAAAAGAGT
 1263 GAAGGATATAGGATACATCITTAAAGAAAATTIGCIAAAAGCIGIGGAGGACAGGTTGIGT
 1441 GACAA-CAITIICAIAIGICIIIALIGGCGGGGGGGGGGGGGGGGTGGAAT 1490
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Tissue Provintement CLONIECH Laboratories, Inc
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sequence: $1 CACODITALIANDOC $1 and $1 adaptor sequence: $2 Alliandochinascondandoc $1 (30)BN $3 (Whose B = A, C, or G and N A.C. G, or D.L. Average insert size 1.9 kb (range 0.5 4.0 kb). 12/15 colonies contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech Taboratories (Palo Alto, CA). 125 c. 180 q. 279 f.
 446 HACTALGGAAFTGAAFACEGGGGCFGTTIATAAATFTTGCTTTAATTAAAT 3420
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 421 AAAAGTGGGAAGGAAGTATAAGGATATGATACTATGATACTAGTAGTGAAAGAGATTTGATA 3480
 27/52 PPATGGATAGGTCAAAGAAAGAAAATGAGGATGTCAGGAQGTTGGTGGAGAGTGTG 2821
 2882 TATGGGGAATTTAATATCTTCAGGTCTTTTTGGATATAAAATGTGCAGATGGGAATTG 2941
 2942 TFFGGGTGAFTCCTAAGCCACTEGAATGTTAGTCATTGTTATTATACAAGATTGAAAA 3001
 002 FOLDOO AAA DOO GOALLAAAAA SHOO BAGACA HELLOO LOO BAAA BAAA 3001
 062 AFTGGTGGTFFAGGATAGTAAJAATGGCCCTAGAGTGGGAGTCCTGAIAAGGCAGGC 3121
 0122 CTGTGTGACTACTITGCCTTCTTTGTAGCAIATAGGTGATGTTGGTGTTTGTTTATT 3181
 8182 AALITALAIGEALAITITITITAATITAAGAIGAAGGGGTTAGAAAAIGTGGGTATGIA 3241
 2822 TAPAPPTPTGGATTGATTGTPTGTPAGAGATGTGATTAACTTTGCGAGGTTGTGTTT 2881
 461 PEGICICACTACTIFGCCTFCTITIGIAGCATAIAGGIGAIGIFGGFCTTGTTTTATI 420
 601 TIACHALAMAALCIGATATACHGITIGUTTGITIALAAAA-ITTGCTTIAAATT 659
 HTHEFTELLITTE HTHEFTELLITTELLI
 61 TACACCTCTGGALFCATTGTCTCTCAAGAGGGAACGTATAACTTTGCCAGGTTCTGTT 120
 4; Gaps
 181 TITGGGTGATTGCTAAGGCACTTGAAATGTTAGTCAITGTTATTAIACAAGAITGAAAA
 guery Mateh 19.5%; Seoze 692.2; DB 12; Longth 767;
Best Local Similarity 97.1%; Pred. No. 2.6e 125;
 4481 CCT-AGAATGI AAAAGAATIFACIGAITATITITITICAICGAAGTIAI 3528
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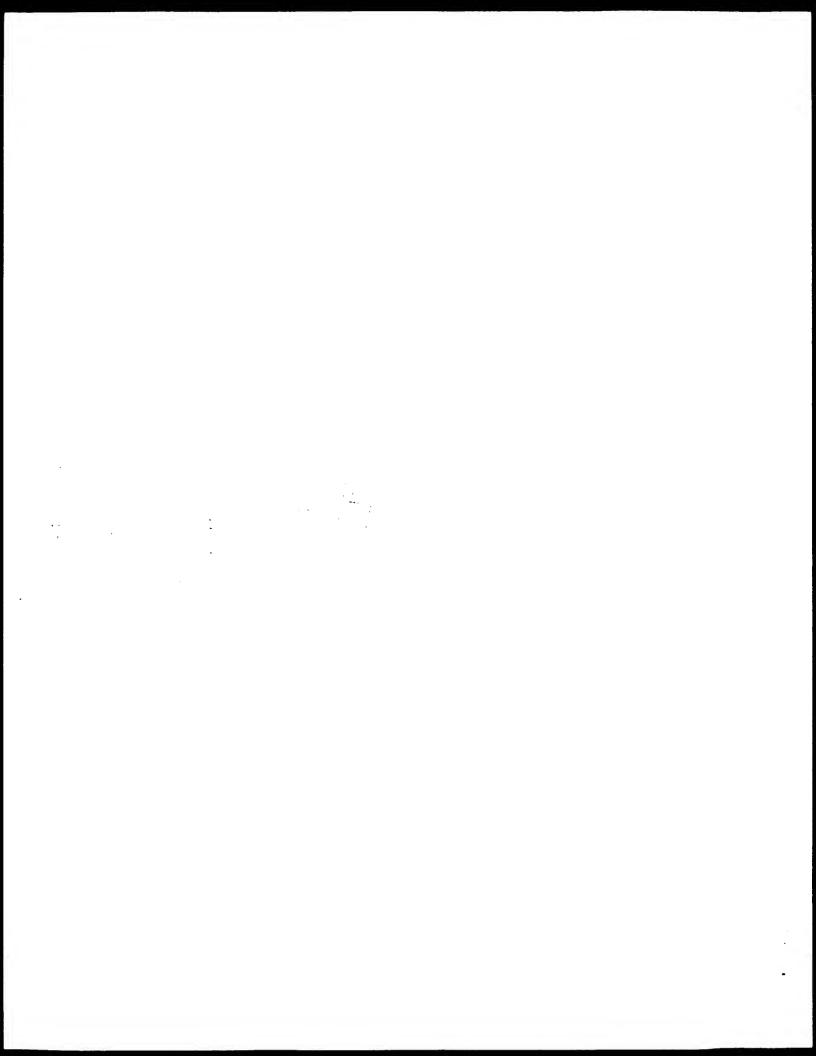
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Site 2: Sall; Cloned unidirectionally: obugo di primed.
Average Insert size 2.5 kb. Library enriched for
 Homo sapiens
Eukaryota: Metazoa; Chordata; Craniata; Vertebiala; Euleleostomi;
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 1057
 1117
 2758 GATAGCAIGGAIACCICAAACAAGGAAGAGAAAIGAGGAICICAGGACCIIGGIGGACAC 2817
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 cDNA Library Preparation: Life Technologies, The CDNA Library Analyed by The Liming. Consortium (LLNL) DNA Sequencing by: Ademount Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
 1 (bases 1 to 972) NIH MGC bttp.//mqc.aci.nih.qov/ National Institutes of Health, Mammalian Gene Collection (MGC)
 61 GATAGCATGGATACCTCAAACAAGGAAAA1GAGGATGTCAGGAACTTGGTGGAGACT 120
 361 TAAAAFIGGIGTGTTTAFUGATAGFAAGAAGGGGAAGAGGGGAGGTGCTGAFAACGGAAG
 Gaps
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 1058 TAAAAATTGCTGTGTTTALGGALAGTAAGAALGGTCCLAGAGTGGGAGT-11GALAACT
 Mammalias Butherias Primatess Catarrhinis Hominidaes Hemo.
 9
 19.5%; Score 691.8; DB 13; Length 972;
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 Unpublished (1999)
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 Location/Qualifiers
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 Tissue Procurement: ALCC
 Best Local Similarity 96.7%;
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 Matches 728;
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Mammalia, Entheria, Edimates: Catarthini: Hominidae: Homo.
1 (bases 1 o 572)
 1779 TCTTFAATCTTCCTCTCCAGAATAATCACACTGCAGAGATALGTATCTTTCTCCTCTAAG 1838
 [839] ALTITOAAAAAAAAAAHTOAATTAOAGTGIAAAIIGIAGIGGAAAIGGAGAGAGAGAAA 1898
 1899 AGCAACCTCACCTTCCACACCCAGAACCCATIGAAAICTACCTCTCTTICACIGIIIIA 1958
 2019 | GARATATARIMATIASAATATOALOHSAADOLIIIOONAGNOKOOLOONGAATOA | 2078
 2079 CTATCATCATCATCACACACACATTTCGACCAAATTATGATCTGATCTCATGTATGSCAT 2138
 2139 ATGCAAAGTGAAGAATATAGACCTTAAATTCAAAAFCATTGTAAGGAGGATAGAAGGATCF 2198
 2199 ICTIAN BATHATA SANANAAN TATAAN MATITI HATITI HATANAAN ANGA ARATATA 12288
 2259 TATLATACTALTOTATAAPIOOFFOTTOAFGAGAGAAAGAAAAAAAAAAHATITOGAGIA 2318
 HITTELLETTECTTCCTCCCGGAATAATCACACTGCAGCAGATATCTTICTTLITTELLTTTT
 313 TAAAAAAGTGTATCGGGTAGCCIATCTCCGGCIAAATACACTTTGTGAACGCCTTCTGTGTC 372
 cDNA Library Arrayed by: The L.M.A.C.E. Comsortium (LLML)
DNA Sequencing by: Incyte Cendmics, Inc.
Clone distribution: MGC clone distribution intormation can be
 553 TCC1CATGCTGTTCAGGAGATTCAAACGTGTTFTCAAAGAAGAAGAGGGGALGALIC 612
7 x 1011ATIAAACAATGAAAGGACGAAGGACCAACTGATCAACTGCTGCTTGTC, 132
 R.H. MGC http://mgc.nel.nth.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 1959 TAAAAAAGTGTATGGGGTAGGGTTATGTGGGGTAAATAGAGTTTGTGAAGGGGTTTGTG
 CDNA Library Preparation: Life Technologies, Inc
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 High quality sequence stop: 558.
 Email: cqapbs-rdmail.nih.qov
 Location/Qualitiers
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 Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 fibrary constructed by life
 1659 ACGAIGHGAACGAALGALGGAALGCCTEFTATGGTCTCAGAIGACTHAITHGA 1718
4237 IATTAATTIATATGTATATTTTTTAATTTAACATGAACA.CCTTAGAAAAATGTGTGTA 4237
 3238 TOTATCLLOCAAATGCAATTTGALTGACCCCATTCACCAAATTATCCTGAACTCTTT 3297
 TGCTTTTTATAAAATTTTTT 3412
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 54] INTERCLINGAAAIGCAAITGACTGCCCAITGACCAAAAAITATGCTGAACTTIG 600
 CDNA Library Preparation Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Apencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be toold the Limit County (1:1 + 1.M.A.G.E. Consortium/LiMn. at:
 National Institutes of Health, Mammalian Gene Collection (MGC)
 o; daps
 Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
 19.1%; Score 679; DH 13; Longth 835; 100.0%; Fred. No. 1.6c 122;
 1 others
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 /Lissue Lype="amplific amplanama"
//Jab_hogt="DHIOR (phage-resistant)"
 233 t
 4413 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3444
 Plate III AM 12206 Town o column: 07
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 7.1 ATTAAGATAAAAGGTGGGAAGGAAGTATAAAGG 753
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 137 9
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 4.58 ATTITACIATIGGAATCTGATATACTGTG
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/tissue type "adenocarcinoma, cell line"
//lab host "DBHOB (phage-resistant)"
//note-2-fordan: liver, Vector: pCMV-SPORT5, Site_1: NotI;
Site_2: SalI; cloned uniditectionally; oliqo-dT primed.
Average insert size 1.7 kb. Library enriched for
tull icough clones and constructed by Lite Technologies.
Note: this is a NH MGC Library."
 24.29 ATAITICACCOTGAAGAGTCCAIATAAAATTTCAGAAGGTCTGCCAAGAGGACAAAAA 2479
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 FOLS CATELAAAAACHIGLAGCAGALIGIIICCICLICGAAAGTAAAALIGGIGGIFTAIGG 3078
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 241 CAGATGAAGTAAACATCTGGGAGAGTCCAAATTTCAGCAGAAACTGGAGAAATGA 300
 301 CTILLIACTOSAR PARAMENAAAA CAAAAA GAAAA GAAAGAA GAAAGAA 360
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 421 GICTCTCACAGAGGGGACESIAIAACTIFGCGAGGTTCTGTTATGGCCACATTTAAIAT 480
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 1 AFALLTOACCOTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAGGAAGAAAA 60
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 Conservative
 4979 ALAGEAAGAATG 3090
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Scoring table.

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| 7 752.4 D3.0 H122<br>9 725.4 D3.0 H122<br>10 699.6 D20.1 P22<br>11 698.2 D1.4 P22<br>11 698.2 D1.4 P22<br>11 698.2 D1.2 P32<br>11 698.2 D1.2 P32<br>12 691.8 D2.2 P32<br>13 642.2 D2.2 P32<br>14 642.2 D2.2 P32<br>22 656.4 D2.2 P32<br>24 556.4 D2.2 P32<br>25 566.4 D2.2 P32<br>26 558 D2.2 P32<br>27 596.3 P32<br>28 558 D3.2 P32<br>29 528 D3.2 P32<br>20 530 D5.2 P32<br>21 596.4 P3.1 P32<br>22 52 P33<br>23 510.2 P32<br>24 486.4 P3.8 P32<br>25 56.4 P4.1 P4.1 P32<br>26 57 P4.2 P4.3 P4.4 P4.3 P4.4 P4.3 P4.4 P4.4 P4.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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# ALLCINMENTS

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| Σ (                     |          | NIH_MCC_72 Homo sapiens ciMA clone                                |
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| × (                     |          | M450031.1 GI:18499071                                             |
| × (                     |          | S.T.                                                              |
| × (                     |          | เมลอก.                                                            |
|                         |          | omo sapiens                                                       |
|                         | <u> </u> | Bukaryota, Metazoa, Chordafa, Craniafa, Verrebrafa, Enfeleostomi, |
| HZZDÜME HAGM            | Σ        | ammālia; Eutheria; Primates; Catarrhini; Homn.idae; Homo.         |
| ZZDONE EZEM             |          | (bases 1 to 102+)                                                 |
|                         |          | THE-MGC http://www.unst.nih.ace//                                 |
| ⊃©¤€ ₩ <b>Д</b> ЩЩ<br>3 |          | National Institutes of Health, Mammalian Gene collection (MGC)    |
| <u>бян найш</u><br>[    |          | npublished (1999)                                                 |
| я <b>н наг</b> ш        |          | ontact: Robert Strausberg, Ph.D.                                  |
| + + <del></del>         | 12       | mail: eqapbs-ramail.nib.gov                                       |
|                         | +        | issue Procurement: ATCC/DCTD/DIP                                  |
|                         |          | eDNA Library Preparation: Life Technologies, Inc.                 |
| . A.T.E                 |          | CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)         |
|                         |          | DNA Sequencing by: Agencourt Bioscience Corporation               |
| - 4 L H                 |          | Clone distribution: MGC clone distribution intormation can be     |
| Ş                       | <b>-</b> | found through the L.M.A.G.E. Consortium/LLNL at:                  |
|                         | ч        | ttp://image.llnl.gov                                              |
| S                       | -        | late. LEAMI2264 10*. 3 column. 22                                 |
| 3                       | ==       | igh quality sequence stop: 644.                                   |
|                         |          | Location/Qualitiers                                               |
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 2214 AGTATCASTIGSTGAATCASTGGGGACTCTGAGAAGTTCCAGAAATAAATCAGATCCT 2273
 574 IAACITTGCCAGGTTOTGTTTALGGCCACATTTAATATGTTCAGCTTCTTTTTGTGTTATTTTGAG
 26.94 AAAATGTGCAGATGPAATIGTT; GGGTGALIOFTAAGFFATTGAAATGTTAGTCATT 2691
 340
 181 ILLCCACCAGGGGGGGTAOCTIGICACCAATACCTCAGATTGGTGGAAGGGGTTACAAAGTT 240
 HITTELLITTE
 481 GAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGCAGATGGAAGTAAAGATGTGTGG 540
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5', mRNA sequence.
MM561083
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Mammalia; Eutheria; Primates; Catarrhini, Hominidae; Homo,
 Contact: Pobert Stranscorpy,
Email: cgapbs r@mail.nih.gov
Tissue Procurement: Arto
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Editory Arrayed by The L.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Blossiteme Corporation
Clone distribution: MSC Clone distribution information cau be
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NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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 14.4. CTTATTAAAVAATGAAAASACCAAAAASSACCAACTGATGACCTTGAACTGCTT 14.91.
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 RQ4 49221.1 GI:21178297
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 National Institutes of Mealth, Mammalian Gene Collection (MGC)
 Unpublished (1999)
Confact: Robert Strausberg, Ph.D.
Email: eqapbs:remail.nih.gov
 1 (bases 1 to 1081)
NIH MGC http://mgc.nci.nih.gov/.
 REFERENCE
 AUTHORS
 POURNAL.
 COMMENT
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Note: this is a NH_MSC inbrary."
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 7667
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Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
 Albahost The MGC_92"

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//isse_type "combryonal carcinoma, cell line"

//isse_host "DHIOH (phage-resistant)"

//into***Organ testis: Vector: pCMV-SPORTO; Site_1: Not1;

Site_2: Sall; Cloned unidirectionally; oliqo-dT primed.

Aversage insell site_2: S. Bb. Library enriched for

Iull:length clones and constructed by Library enriched for

Note: this is a NIH_MGC_Library.
 3148 AGIATAACCATAFGATACTAFCATACTACTGAAACAGATFFCATACCTCAGAATGTAAAA 3207
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NIH-MGC http://mqc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 HILLIT
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 398 FFBAACTGTCACCTCCAFGTFGCTCAAAGAACCATATAAAACAGCFGTFAFACCCATFA 457
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Email: cyapbs-r@mail.nih.gov
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ABENITALINI DARGOOT NIE_MAT_42 HOME SAPIPAS CONA CLODE IMAGE:5575683
 Eukarycka, Metabba, Chordata, Craniata, Vertebrata, Futeleostomi;
Mammalia; Eutheria, Primates, Catarrhini; Hominidae; Homo.
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181 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATG 240
 578 AGGTGAAAAATGTTTATTTCAAAAATITIATACCFFIIAIGAATICTCTTGGACTTGIAA 637
 301 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTGTAAACGATACGAAGAAATTTATGTTA 360
 758 KILATAGAMASITITGAAAMAMAMAMAMAMAMAMAMAMAMATAACITIGATGAAGGGGGA 817
 421 CTATAGACAGTTTTGAAACACAGAACACACGAAAAAGGTTGATGAAGAGGTGA 480
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 878 TOATTITAAATTIZAGGAAGTGATGAAGCTTGAGAAAAFGTGAGTTTGCTATTTTAACAAGT 937
 National Institutes of Health, Mammalian Gene Collection (MGC)
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 72. AACTTSGA :: PSCTFGTATTA 'CSASTAALGSAALCATSATTAAALSAAASAAAA
 cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLML)
 1175 APPROPRING OFFITTEAGGITSTATEGGCCACATATAGC 1215
 Contact: Robert Strausberg, Ph.D.
 1 (bases 1 to 1001)
NIH-MGC http://mgc.nci.nih.gov/.
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 BM475603.1 GI:18524645
 Unpublished (1999)
 5', mRNA sequence.
BM475603
 Homo sapiens
 human.
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/tissuc_type="embryonal carcinoma, cell line"
/lab_most="billob (phaqe-resistant)"
/more="organ restis: Vector: pGWV-SPORT6; Site_1: Not1:
Site,2: Sall; cloned unidirectionally; oliqo-dT primed.
 Average insert size 2.5 kb. Library enriched for full length clones and constructed by Life Technologies Note; this is a NHE-MGC Library."
 126 AGAAATTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 185 .
DNA Sequencing by: Ageneourf Bloscience Corporation can be counce distribution. Will clone distribution information can be cound through the L.M.A.G.E. Consortium/LLML at
 785 CACCACGAAAAGTAACCTGATGAAGAGGTGAATGCTGCTGCACACACTCCACTTA 844
 224 TCACAFITTIFATTAGCTAAAGGGGAAGTATTACAAATGGAAGAFGATGTGGTGAFFTTCAF 282
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 46.5 TTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATT 522
 7.2% TELEPGALCARGALAAAACHCEECGACGACTGALAGACAGAGAA 784
 186 TOTALEGITIGGASTCTTGASCAATT-GGAAAGGACATGAACTFATATTTGACAC 244
 245 AAPPOPAGTAGTAFT FOR AUTGAATAAATTITIGGATTIGGTGAAAAGTTTIGTTIGGA 304
 545 TECH CERANDAN TO BANG TATATA TAGA TO STO A A A A PERTY ATTY CADADA TO TECH A TECH TATY TO A A A A A A A A
 605 TTATACCTITTATGABTFCTCTFTGGACTTGTAACATCTAATGGACTTFCAGAGGTTGAAA 664
 665 AFCTTECTAAACGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAGATTAT 724
 644 TTTTGGATGALGATAAAAGTGTTGAGAGTGTATAGAGAGHTTTGAAAGAGAGAA 702
 3; Caps
 24.1%; Score 786; DH 13; Longth 1001; 95.1%; Pred. No. 3.6e-141;
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Zelone Tib-"NIH_MGC_92"
 High quality sequence start: 17
High quality sequence stop: 734.
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 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Miramalsu, M. and Hayashicakki, Y. Normalization and subtraction of cap trapper selected to DNAs to prepare full-length cDNA libraries for rapid discovery of new genes Cerumne Res. 10 (10), 1617-1630 (2000)
 Shibata,K., Itoh,M., Aizawa,K., Naqaoka,S., Sasaki,N., Carninci,P., Sumi,N., Akiyama,J., Nishi,K., Kisumai,T., Tashiro,H., Itoh,M., Sumi,N., Ishi,Y., Nakamura,S., Hazama,M., Nishino,T., Harada,A., Yamamoto,R., Matsumoto,H., Sakaquehi,S., Ikeqami,T., Kashiwadi,K., Yujiwake,S., Inoue,K., Todwa,M., Ohara,E., Matahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsumia,S., Kawai,J., Okazaki,Y., Muramaish,M., Inoue,Y., Kira,A. and Hayashizaki,Y., Sequence analysis (RISA) system (84-Lormat Sequence analysis (RISA) system (84-Lormat Connum. Res., 10 (11), 1757-1771 (2000)
 Mammalia, Butheria, Rodentia, Sciuroquathi, Muridae, Murnae, Mus
 AK911246 110 days embryo whole body cona, RIKEN full3length enriched library, cloue;2600017M22;retinoblastoma 1, full msert
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
 905 CTFCAGAAATGTGATIT -CCTATTTAACAACTGCACAGTGAATCCAAAAAAAAATAT 962
703 CACCACGAAAAAGIBAACCIIGGAIGAAGACTIGAALGIAAFTCCICCFACACTCCAGITA 762
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 Mus musculus (strain.057HL/6J) 10 days embryo ebNA to mRNA,
 clone_lib:RIKEN full length enriched mouse conA library
 Carninci,P. and Hayashizaki,Y.
High-efficiency tull-length cDNA cloning
Meth. Enzymol. 363, 19-44 (1999)
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 1364 tp
 AK011246
AK011246.1 GI:12847243
HTC; CAP trappor
 clone:2600017M22.
 Mus musculus
 Sequence
 99279253
 10349636
 11042159
 20530913
 1076861
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Ada. L.J., Aladwar K., Akulita, S., Akimura, T., Acho. H., Ardi, A., Arakwar, T., Baldarelli, P., Foundill, Brownstein, M., Bult, C., Carninel, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Harda, J., Hayatsu, N., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hunc, D., Inotani, K., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Hunc, D., Inotani, K., Hill, D., Hiramoto, K., Hiraoka, T., Hori, F., Koho, H., Koda, M., Kaya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nomura, K., Safita, K., Taqami, M., Taqama, A., Takahashi, P., Tanaka, T., Tagama, T., Yamamanka, I., Yawanaka, I., Yawanishi, A., Yoshida, K., Muramatsu, M., and
 The library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Piken Genomic Sciences Center and Genome Science Leteratory in Piken Genomic Science Leteratory in Piken.

Division of Experimental Animal Research in Riken contributed to proper mouse tissues. First strand cDNA was primed with a primer proper mouse tissues. First strand cDNA was primed with a primer for Genomical Property of the Contributed to proper and subsequently enriched for full-length by cap-trapper. Second stand of the Mouse proper of the Mouse Proper of Confidence (5) sequence (5) sequence (5) with Abol and Ssti. Cloning sites, 5' end. Xbol; 3' end. Ssti.
 ELEEPEFIALCQKI.KVPDHVRERAWLTWEKVSSVDGILEGYIQKKKELWGICIFIAAV
DLDEMPFTITELQKGIETSVYKFFDLI.KFIDTSTKVDNAMSELLKKYNVI.CAIYSKI.E
 RTCELIYLTQPSSALSTEINSMLVLKISWITFLLAKGEVLQMEDDLVISFOLMLCVVD
YFIKESPPALLREPYKTAALPINGSPRTPRRGQNRSARIAKOLENDTRI 1EVLCKEHE
CNIDEVKNVYFKNFIPFINSLGIVSSNGLPEVESLSKRYEEVYLKNKDLDARLFLDHD
Schanlich.C., Seya,T., Shibata,Y., Sturch.E.F., Sucuki,H.,
K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
 /franslation-"mopkapapaaaappoppppppppppgngcppgpppppppp
 close_lite "RIKFN full length enriched mouse obwA library"
 Joyo-oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L.,
Wynshaw-Boris, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohisuki, S
 Submitted (10-Jul.-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Ensemble (Fikiw), Takmiatry for Schumen
 Please visit our web site (http://genome-gsc riken go jp/) for
 Functional annotation of a full-length mouse cDNA collection Nature [109 (6821), 685-690 (2001)
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Si vo f "PANISM SM 2600N17M22"
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 /close."2500017M22"
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 /gene-"Rb1"
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 1024 CCTTTTATAAATTCACTTGGAATTGTATCATCTAATGGACTTCCAGAGGTTGAAAGTCTT 1083
 1144 GANGANGANAAANGANGANGANGGANGGAGAGAGAAGAGAGAGAGAGAGAGAGA 1203
 616 PORTICA GARDO CONTROL MATERIAL MATERIAL CONGROCOTORA AND 1669
 544 ATCGATACCAGTACCAAGGTTGATAATGCTATGICAAGAGIATTGAAGAAGIATAATGTG 603
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 784 PTAATGTHGTGTGTGTGTAGTGAGTAGTHAATTAAGTCTCAATGAGTGAATTAGTGAGAGAG 943
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 490 AAPAGGAGIGGAGGGATAGGAAAAGAACTAGAAAATGATAGAAAATIALIGAAGIIGIC 549
 550 INTABANAANATAAATATAATATAAAAAIGAAAAAATGITTAITTOAAAAATITTAIA 609
 670 ICTABARGATARGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTTTTG 729
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 790 CGAAAAAGTAAGGTTGATGAAGAGGTGAALGTAAFTGGTGCAGAGAGGTAGGAGT 849
 850 GITATGAAÇAÇTATGGAAÇAALIAAİĞALGALITLAAALICAGGAAĞTGALCAAÇITCA 909
 70 ACTEACCTACACAAAAACATAGAATCAGTGCCATAAATTCTTTTAAGTTAGTAAAAAA 129
 130 ATTEATACEASTACEAAAGTTCATAATGETAAGTCAAGACTGTTGAAGAAGTAFGAIGTA 189
 376 HAATGITAIGIGIGGIIGAGIAIIIIAIIAAAGIGEGAGGGGGAGGIGGIGGIGAAAAAA 429
 Gaps
 10 CLGFGGGGGAALCIGIAINTITALFERAGCAGIIGACCIAGAIGAGAIGICGIICACIIII 69
 250 AGPAGITICATAICTAATIGAAAIAAATICTICATIONIAAAAGITITGITIGALGACA
 190 TEGITICAPATETINAGPAAAFISSAAASSACAISICAACITATATATATTEGACAAACC
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 DB 11; Length 1364;
 0; Mismatches 102; Indels
 1 others
 1324 GAAAATCTGATTTCCTACTTCAATAATTGCACAGTGAATCC 1364
 910 GAAAAICIGAIIIGGIAIIIIAAGAAGIGGACAGIGAAICC 950
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 Scote 777.8,
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of three ovaries, from femdies ranging in age from 88 to 49 yo. Library is oligo-di primed and directionally cloned (Brokk site is destroyed upon cloning). Average insert. size 2.1 kb. Insert size fange 1.5 kb. Library is constructed and enriched for full-length clones and was constructed by Gruber (Invitroyen) possages Genelics tracking order 036.
 HM545881 | 1122 bp BRNA | Fincar EST 20-FIR 2002 ACRNO-07RI, 6505183 NIH_MGC_125 Homo sapiens conA clone IMAGE:5588245
 Zhote-"orqan: ovary (pool ol 4); Vertor: pCMV-SPORT6;
Site_1: EroKV (destroyed); Site_2: Not1; RNA source pool
 Eukaryola, Metazoa, Chordata, Cramiata, Verrebrata, Euteleostomi,
Mammalia: Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1-to-1122)
 2231 TEODAGH FOLGADAAD LODAGAAALAAA I GAGALAGHAAGAAGGGACGGEGTG SSSS
 2293 CHCAAAACAACHCHGAACCAACCGFCCHAAACGACHGAAAAACHACCFFFFGAF 2352
 24.1.3 CAGAAACHGGGAGAAAGACHCHAFTCGAAGAAAGGAAAAGGAAAAGGAAAAHGAT 2472
 2.45 ATTGANGGATCAGATGAGGGGGGAAGTAAAGATCTCCCAGGAGGTCCAAATTTCAG 24.12
 25 e e GTACACCECEGRATICATECTCECACAGATCTCACECTATAAACETECCCAGGTECTGT 2592
 cDNA Library Preparation: Life lechnologies, Inc. cDNA Library Arrayol by: the L.M.A.G.E. Consortium (LLNL) MAN Sequencing by: Advanced by: the Corporation Clone distribution: MsP. clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: Plafe: LLAMI255 row: a column: 14
 480 AGPATGGALAGGLCAAAGAAGGAAGGAAALGAGGALGTGAGAGG11GG1GGAGAGTG1 539
 NIH MSC http://mgc ict.nih gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 240 FEGTAGACTICTGAGAAGTTCCAGAAAATAAAATCAGATGCTAACAGGGACGGTGTG 299
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 Contact: Robert Strausberg, Ph.D.
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Tissue Procurement: Invitrogen
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 mRNA sequence.
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EST (Poustka,A., Wellenreuther,E., Mewes,H.W., Weil.E. and Wiemann
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
 Heidelberg/Germany) within the cDNA sequencing consortium of the
 No sl sequence available.
This clone (DKFZp31300816) is available at the KZFD in Berlin.
Flease contact the RZFE. Ressour enzentium, Henbnerweq 6, 14059
 17.7
 2773 AATTGCTGTGCTTFALGGALAGLAAAAALGGCGCLAGAGHGGGAGTGTLGALAATGCAGG 2842
 28.87
 2950 TCTATCTTCCAAATGCAATTTGATTGGCTTTCGGTTTCACCAAAATTALCTTGAGTTTTCT 3009
 4010 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAAAATTACTAATTTTACACATTAGATTT 3068
 Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DKFZ); Email s.wiemann@dktz_heidelberg.de;
sequenced by DKFZ (German Cancer Research Center,
 2653 GTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAA 2712
 959 TCTATCTTCCAAATGCAATTTGATTGACTGCCCATTCACC AAATTATCCTGAACTCCTC 1017
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
 Department Lehrach
Max-Planck-Institute for Molecular Genetics
 sequence of the clone insert
 Fax: +49-30-84131128
Email: poustka@mpimg-berlin-dahlem.mpq.de
 Thnestrasse 73, 14195 Herlin, Germany
Tel: +49-30-84131623
 3069 TATTTTACTATTGGAATCTGATATA 3094
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 AL597811.1 G1:15160502
 Contact: Poustka A.J.
 German Genome Project.
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 3824 AATTATGATGTGTTCCATGTATGGCATATGCAAAGTGAAGATATAGACTTAAATTGAA 1883
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 8.01 IGASAAGITCCAGAAAATAAATCAGATGTATGTAACAGCGACGGTGTGCTCAAAAGAAG 560
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AGENCOURT_7566045 NIH_MGC_92 Homo sapiens CDNA clone IMAGE:6041563
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 Fukaryola, Motazoa, Chordata, Chanjata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
 CDNA Library Preparation: Lite Technologies, Inc., CDNA Library Arrayed by: The I.M.A.G.E. Consortion (LINE) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LIAN, at: http://image.llnl.gov
 1 (bases 1 to 880)
NIH MGC http.//mac.nci.nih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 247 COCAGCASTICGATATOTACAATAAATTOTACAATGGGGGGTTACAAAAGTTTCTTGGATC 306
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 181 CAGTTAATGCTATGTGCTTGACTATTTTATTAAAGTGTGAGGTGGCATGTTGGTGAAA 240
 547 CTCTGTAAAGAACATGAATGTAATALAGATGAGGGGAAAAATGTTTATTTGAAAAATTTT 6.06
 361 CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 420
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 human.
 Query Match
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// issue type="adenocarcinoma"
// issue type="adenocarcinoma"
// idb_host="DH10H (II phage=resistant)"
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// idb_host="DH10H (II phage=resistant)"
// idb_host="DH10H (II phage=resistant)"
// idf (ggcgactggggcc): Site_2: Sf1 (ggccattatggcc): Site_1: Si1 (ggcgactggggcc): Site_2: Sf1 (ggccattatggcc): Site_1: Si1 (ggcgactggggcc): Site_2: Sf1 (ggcgactggggcc): Sf2 and 3' adaptors were used in cloning as tollows: S' adaptor sequence: S'-ATICTAGAGGCGGGCGACATGGGT(3D)BN-3'
// where B - A, C, or G and N - A, C, G, or T). Average insert size 1.5 kb (range 39 4.0 kb. 1475 colonics contained inserts by PCR. This library was enriched for full-length clones and was constructed by Clontech inbotatories (Palo Alto, CA). Note: this is a NIH_MGC
 EST 18-APR-2001
 Eukaryota; Metazou, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 602611848F1 NIH_MGC_60 Home sapiens cDNA clone IMAGE:4737634 57,
 chNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution and be
607 ALACCITITIATGAATICITICITICIAACATCTAATGGACTTCCAGAGGTTGAAAAT 666
 421 ATACCITITATGAATTCICITIGACITGIAACAICIAATGGACITCCAGAGGITGAAAAT 480
 541 TIGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAGTTTTGAAACACAGAAGA 500
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 66.7 CTTTCTAAACGATACGAAGAAATTTATCTTAAAAATAAAAGATCTAGATGAAGATTATTT 726
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 Location/Qualitiers
 BG610661.1 G1:13662032
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 Library."
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linear EST 16: FEB-2001
 2754 GITTLOCHOCHAGAAAGTAAAATTGGTGTGTTTATGGATAGTAAGAALGGGGTTAGAGTG 2813
 2933
 ALS63757 LTT_NFL001_NBC4 Homo sapiens cons clone CS0DD007YA05 3
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 601 TTATCCFGAACTCTTCTGCAAAATGGATATTATTCCGAAATGACGAGAAAAAAATAATTACTA 660
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 Gaps
 21.4%; Score 699.6; DB-12; Length 823; 94.8%; Pred. No. 1.5e-124; tive 0. Mismatches 34; Indels 9;
 3171 TACTA TOAAACAGAFTTCATACTTCAGAATGTAAAAGAACT 3212
 mRNA
 792 bp
 AL563757.1 GI:12913464
 prime, mknA sequence.
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 Home sapiens
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 And E-Torgan Deain, Ventor powNSPOFT is 1st strand of NA was primed with a NotFollyo(df) primer. Five prime end enriched, double stranded cDNA was digested with Not 1 and cloned into the Not 1 and Eco RV sites of the pCMVSPORT 6 ventor Library was normalized Library was constructed.
Eukaryota; Metazoa; Chordata; Crantata; Vertebrata; Exteleostomi;
 975 GAAGGATATAGGATACATCTTTAAAGAQAATTTGCTAAAAGCTGTGGGACAGCGTTGTGT 1034
 312 1YTGTTTTCYTWTTTTTACGACTGCACAGTGAATCCAAAAGAAGTATACTGAAAAGAGT 253
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 732 GAGTGCACGWTAGCAACACAACAATAGAATTGATAGAAATTATGAAGFFCTCFGTAA 673
 555 AGAACATGAATGTAATATAGATGTGAAAAATGTTTATTTGAAAATTTTTATACCTTT 614
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 5.12 TATGAATTGPGTTGGACTTGTMACATGTWATGGAGACTTGGAGAGGTTGAAAYTFGTTTGTAA 553
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 855 GAACACTALCCAACATTAATCATCATTTTFAATTCAGCAAGTGATCAACCTTGAGAAAA 914
 3; Caps
 Email: segref@genoscope.cns.fr, Web . www genesemper ens fr
 Mammalia, Eutheria, Primates, Catarrhini, Huminidae, Humō.
 DB 9, Langth 792;
 23, Indels
 Full-length cDNA libraries and normalization
 and Polayes, D.
 /tissue_type-"neuroblastoma cells"
 Genoscope - Centre National de Sequencage
 21.4%, Score 698.2, DB 9, 93.6%; Prod No. 2 8e-124, tive 23; Mismatches 23,
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 Li,W.B., Gruber,C
 Querr Match
Best Local Similarity
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PG570456 10-APP-2001
502591312F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4717874 5',
 Eukaryota, Metazoa, Chordata, Chaniata, Vertebrata, Euteleostomi; Mammalia, Eutheria; Frimates, Catarrhini, Hominidae, Homo. 1 (base 1 to 75)
NIH Marchite, Z/mgc.nci.nih, quv/. NIH Marchite, Z/mgc.nci.nih, quv/.
 2534 TACACCTCTGGATTCATTCTCTCAVAGATGTGATTGATTAGTTTGGGAGGLGGGI 2593
 1035 OGAAATTGGATCACAGCGATACAAACTGG--AGTGGGGTGGTATTAGGGAGTAATGGAA 1092
 1093 FORDSTITABARYANANABAGAARGATHATOMATAFAAAATITHAGAAAACITGIGAAT 1152
 2474 GCATGGAFAUCTUAAANAANAANAATGANAAPITIAANATIANITTAGAAAAAAAAATA
 cDNA Library Preparation: CLONIECH Laboratories, Inc. cDNA Library Arrayed by: The I M A R F. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be
252 GAAGGAIWIKGGAIACWIYIIIAAAAAAAIIGACIAAAAACGAIGGGAAGGGIIGIII 193
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 Gaps
 4
 21.2%; Score 692.2; DB 12; Length 767; 97.1%, Pred. No. 4e-123;
 1153 GAMAN-CATITICATATGICITIATION STANSOTOTICA ANGRESAND 1202
 18; Indels
 found through the I.M.A.G.E. Consortium/LLNN. at: http://image.llnl.gov
 Context: Fokert Strausberg, 16.0.
Email: cyapbs:18mail.cih.gov
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BG570456
 Query Match
Bost Local Similarity
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
 2894 AATITALALGIALGITITITAATITAACAIGAACACCCTTAGAAAATGIGTGCTAICTA 2953
 073 TTACTALTGGAATCTGALATACTGTGTGTTTTATAAAATTTTGGTTTTAATTAAAT 3132
 1133 AAAARTI GGAAGGAAAGTATAAGGATATGATATGATACTIGAAAGAGAGTTTGATA 3192
 2773
 2774 ALTOTOTOTI ETATOOALAGIAAGAATGOOGETAGAGIGGGAGICCEEGATAAGCCAGGC 2833
 28.34 (TGTCTGACTACITTGCCTTGTTTTGTAAAGGTGATGTGTGTGTGTGTGTTTTATT 2893
 2954 ICTICCAAATGCAATTIGALTGAGT-GCCCATICACAAAATTATCGIGAAGTGTTGTGC 3012
 OLS AAAAATGGATATTATTAGAAATTAGAAAAAAATTAGTAATTTTAGAGATTAGATTTATT 3672
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 3193 CCTCAGAATGT AAAAGAACTTACTGATTATTTTTTTCATCCAACTTAT 3240
 CDNA Library Preparation: Life Technologies, Inc.
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 1 (bases 1 to 972)
NIH MGC http://mgc nci nib qozz.
 Email: eqapbs ramail.nih.gov
 Tissue Produrement: ATCC
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/note-"ordan testis: Vector: pMM SPORTE Site 1: Not:
Site_2: Sall; Cloned unidirectionally: oligo-di primed.
Average insert size 2.5 kb. Library enriched for
1911 length closes and constructed by Life Technologies.
Note: this is a NIH_MGC_Library."
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 2890 TATTAATTTATATGTATATTTTTTTAATTTAACATGAACACCCTTAGAAAATGTGTGCTA 2949
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 2830 AGGCCTGTCTGACTACTTTGCCTTTTGTAGCATATAGGTGTGTTTGGTGTTTT 2889
 2950 ICTAICH CCAAATGCAAHHGAHGACHGACGAHTGAGAAAHHAFGGGAAAFGAAAH
 8010 TGCAAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTACACATTAGATTTT +069
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 181 TGTTTATGGCCACATTTAATATCTTCAGCTCTTTTTGTGGATATAAAATGTGGAGATGGA 240
 661 ATTITACIATEGGAATCTGATATACTGTGGGCTTGGTTTTATAACAATTITGCCTTTTA 720
 edeb (9
 1 CATCACAAACTGGCAGAAATGACTTCTACTCGAACACGAAATGCAAAAAGAAAAIGAAAT 60
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NIH-MGC http://mac.nci.nih.qov/.
National Institutes of Health, Mammallan Gene Collection (MGC) Unpublished (1999)
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 1.71 ACCATOTOAACATOGAATCATGCATTGCATGGCTCTCAGATTCACTTTATTTGA 1430
 1741 IGAGCACPCAGAATTAGAAGATATCATCTGGACPTTTTCGAGCACACCPGCAGAATGA 1790
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 CDNA Library Preparation. Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL) DNA Sequencing by: Agencourt Bioscience Corporation Cons distribution. MCC Flower distribution information can found through the I.M.A.G.E. Consortium/Link at: http://www.n.t.l.l.j.w.e.column: 07
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Tissue Procurement: ATCC/DCTD/DTP
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 Location/Qualitiers
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 BM453724.1 GI:18502764
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 /note-Torgan: liver; Vector: pCMV'SPORT6; Site_1: Not1:
Site_2: Sall; Cloned unidirectionally; olido-dF primed.
Average insert size 1.7 kb. Library enriched for
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Note: this is a NHLMGC Library."
 1911 TUGICATGUIGIICAGGAGAAANIICAAAGGIGITIIGAICAAAGAAGAGAGAGIAIGAITU 1970
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 1851 AFGCAAAGFGAAGAATATAGACCTFAAALICAAAATCATTGFAACAGGGLACAAGGALGL 1910
 2132 ATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAACAAAAA 2191
 603392330F1 NIH_MGC_90 Homo sapiens cDNA clone IMAGE:5402622 5'
 553 TOCTION OF POAGGAGAGATIOAAGGIGITITIGATOAAGAGGAGGAGTATGATTC 612
 CONA Library Preparation. Life Technologies, Inc. CDNA Library Arrayrd by the 1 M A G F. Consoltium (LDNA) DNA CONTROLLIUM (LDNA) CONTROLLIUM (LDNA) They be demonics, Inc. Clone distribution. MGC vione distribution information can be found through the T.M.A.G.E. Consortium/LLNL at: http://mage.llnl.gov.row.k.column: 07
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| 5 31    | 2412 C | GARDPARCOTOTOTAAAOCACIDAAAAACIAOOPTTIGATATIGAAGGIGAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAG                                                                                                          | 2471        |
| 25      | 241 0  | CRGADGRAAGTAAACATCTCCCAGGAGTCCAAATTTCAGCAGAAACTGGCAGAAATGA<br>                                                                                                                              | 2431        |
| 5 ±     | 401 (  | CTECTACTOGAACACGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCAAACA<br>FELLELELELELELELELELELELELELELELELELELE                                                                                     | 2491<br>360 |
| ਨੂੰ ਤੋਂ | 361.7  | AGGARGAGAA CAGGA CHA AGGCH GGHGACACHGHGAGACCE GGALTGATT<br>FILLER FELLER FELLER GAGACCTGGTGGACACGTGTGTACACTGTGGACTGTGGATTCATT<br>AGAAGAGAATGAGGATCTCAGACCTTGGTGGACACGTGTGTACACGTGTGGATTCATT | 2551<br>420 |
| 5 €     | 421 (  | GPCTCTCACAGATGTGACTSTATAAGTTTCCCAGGTTCTGTTATGGCCACATTTAATAT<br>                                                                                                                             | 2611        |
| ें इं   | 481    | CTTCAGCTCTHTHGGGGALAIAAAAIGIGGAGGAATTGTTGGGGATTCCTAAGC<br>HTTCHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH                                                                                             | 2671<br>540 |
| 5 ž     | 541    | CACTICAAATGITAGICATTGIFATTTATACAAGATTCAA AATCTTGIGTAAATCCTGC<br>TELLETTELTTELTTELTTELTTELTTTTTTTCAAGATTGAACAATCTTGIGTAAATCCTGC                                                              | 2730        |
| \$ £    | 5731-6 | CATITAAAAAGITGTAGCAGATTGITGCAGTAAAGTAGCAGGGTTTATGGGGTTTATGGGGGTTTATGGGGGTTTATGGGGGTTTATGGGGGTTTATGGGGGG                                                                                     | 2790        |
| š 3     | 5.511  | ATAGTAAGAATG 2H02<br>   -                                                                                                                                                                   |             |

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| Result<br>No. | Sec      | Query<br>Match  | Lend                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | LB            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | noi 1di Josef                          |
| 1             | 1 1554.5 | . T.            | 1364                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | =             | AK011246                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AK011246 Mus mus(2)                    |
|               |          | 34.5            | 1051                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        |
|               | 7        | 57.9            | 17.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | AL597811                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
|               |          | 26.9            | G = 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 - 0<br>0 0 0 - 0<br>0 0 0 - 0<br>0 0 0 - 0<br>0 0 0 0 |               | BM4 5 37 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
|               | ,        |                 | * .<br>:1 :<br>:3 :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | BM4 500 (1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | - u ,                                  |
|               | 7 1056 5 | 4.4.4           | - s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>-</u> .    | #0110175                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | S ACENCO                               |
|               |          |                 | 7 T T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               | AA763411<br>urogage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | AA754411 VW54204.1                     |
| . C           |          |                 | 9 6 7 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ۍ :           | AA763485                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20192 2049 2049                        |
| 7             |          |                 | 92.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | BC10 3 17 4 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | BC223464 - 6623464278                  |
|               |          |                 | 1001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | BM475603                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BM47560 + AGENCOURT                    |
| 1             |          |                 | 8.42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | Alfafanan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Aledense gwsdalm,x                     |
| _             |          | 21.8            | 588                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10            | AW 3 5 B 2 1 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | AW468244 CM4 H1018                     |
| _             | 96       | 21.5            | 704                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | A1646097                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A1646097 vw54h07.x                     |
| -1            |          | <del>-</del> 12 | 7.46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | BII51568                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | B1151568 602916108                     |
|               |          | 21.             | 594                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | AV715544                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AV715534 AV715544                      |
| ~             |          | 다.<br>급:        | را<br>(ا را                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 74<br>-1      | BG149050                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | B3143950 ua88c01.5                     |
| ,             | 45       | 2               | 7 44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | BF144857                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BF144857 60179034                      |
| (             |          | 20.8            | 5.35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | AL692790                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ALC92790 DKFZp3141                     |
| na r          |          | 20.3            | 61.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | AA959846                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AA959846 vw54h01.s                     |
| ~4 C          |          | 71 0<br>71 0    | 797                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | 85549238                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BEC 3278 60106456                      |
| ~1 C          | 000      | 0.02            | ₹ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               | BM802746                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BM802746 AGENCOUR                      |
| 7             |          | 5 G             | C 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |               | ALDGGGG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ALS995, 44 DKFZp 41 4P                 |
| .1 C          | e u      | 7.61            | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -<br>J        | 8022227                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MCZZZZ/ AGENCOUR                       |
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| 10            | . 8      | · ~             | . C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | 100 P. 1 - 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P. 100 P | ************************************** |
| 101           |          |                 | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10            | A8583181                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| 0             | 29 844   | 18.8            | 484                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | BE168095                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE168095 OV3 - HT051                   |
| 33            |          | 18.5            | 646                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 13            | BM4 904 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |
| C:            | 28       | 18.3            | 13:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | AW502887                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ANJO2887 UT HE HNO                     |
| ~             | ac .     | ۳.<br>عن        | u<br>1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               | BE5692226                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | BEGGGGGG ut 26e03.x                    |
|               |          | 1.81            | 74  <br>24  <br>15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               | AA072789                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AA072780 mm76a95.r                     |
| τ (<br>C      | 34 806.5 | 2.7             | 597                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | BE941246                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BE941246 MRO HT015                     |
|               |          | 2.71            | 400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | B1553437                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | M1554947 604194805                     |
| - (4          |          | 1.7.1           | 76.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | A1.353.737<br>A145.0.253.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Allers (777) Allers (777)              |
| . ~           |          | 16.2            | 2083                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | HM456728                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | HM456724 ACENCOLE                      |
| m             | 39 714   | 5.5             | 529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ۍ .           | AA959709                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AA959709 VASA004 x                     |
| 4             | 7.0      | 15.6            | 472                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | AA955457                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AA955457 UL R AL e                     |
| ر<br>4        |          | 15.5            | 462                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               | AISU6529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A1506529 01:27408.y                    |
| 4             | 2        | 15.4            | 514                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | $\overline{}$ | BF418684                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BF418684 UL R BJZ                      |
| ڻ<br>د        |          | 21<br>42<br>-   | 4 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |               | BFB27047                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BERZZO47 RC3 HNGG2                     |
| 4             | 68       | 2.5             | 799                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ~             | 2 3 0 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CR2304 CR2304 Dec                      |
| 4             | 5 667    | 14.8            | 651                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ~             | B1696841                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BI696841 60334496                      |

## ALIGNMENTS

| RESULT 1   |                                                                                                                                         |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| AK011246   |                                                                                                                                         |
| POCUS      | AK011246 19 JAN 2002                                                                                                                    |
| DEFINITION | Mus musculus 10 days embryo whole body cDNA, RIKEN tull length                                                                          |
|            | enriched library, elone:2600017M22:retinoblastoma 1, full insert                                                                        |
|            | sequence.                                                                                                                               |
| ACCESSION  | AK011246                                                                                                                                |
| VERSION    | AK011246.1 GI:12847243                                                                                                                  |
| KEYWORDS   | HTC; CAP trapper.                                                                                                                       |
| SOURCE     | Mus musculus (strain:C57EL/6J) 10 days embryo cDNA to mkNA,                                                                             |
|            | clone_lib:RIKEN full-length enriched mouse chNA library clone:2600017M22.                                                               |
| ORGANISM   | Mus musculus                                                                                                                            |
|            | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;<br>Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus. |
|            |                                                                                                                                         |

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prepare mouse Lissues. First strand obna was primed with a primer of concaragoracycroproperties of the was propored by using trebalose thermo activated newther transcriptuse und subsequently unlithed for full length by cap trapper. Second and stand obna superpared with the primer adapter of sequence [5] darand obna was prepared with the primer adapter of sequence [5] with Xhol and Setl. Cloning sites, 5' end: Xhol? A end: Setl.
 /clone_lib="RIKEN tull-length enriched mouse cDNA library"
 YFIKFSPPALLREPYRTAALPINGSPPTPRROONFSAPIAKOLENGTRIIEVLCKEHE
CNIDEVKNVYFKNFIPPINSLGIVSSNGLPEVESISKPYFEVYLKNKDLDARLFLDHD
KTLQTDPIDSFETERTPRKNNPDEEANVVTPHTPVRTVMNTIQOLMVILNSASDQPSE
 DEDEMPETETELÖKSTETSVYKFFDELKRIDTSTKVDNAMSRELEKKYNVICALYSKEE
RTCELLYLTGPSSALSTELINSMLVLK ISWITFILLAKGEVIOMEEDELY ISFGEMLAVVD
 /translation-"MPPKAPPAAAAEPPPPPPPPPPPPPAAQDSGPEELPLARLEFE
 ETEEFEETALGOKLKVPOHVKERAWI IMEKVSSVDGTUEGY LOAKKELWGTCTFTAAV
 cENA library was prepared and sequenced in Monse Genome they cloud a thought potent of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in PIKEN. Division of Experimental Animal Research in Riken contributed to
 Figure visit our web site (http://genome.gsc/riken.gn]p/\rangle for further details.
 253 GAGCHGGGGGGGGGGGGGTTGAAGAATTGAAGAAGGGGGAATTTATTGCALTA 312
 21 ProAlaProProProProProProProCludiaspareStaClaClaAspSerStyPreGlu 40
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 /dev_stage-"10 days embryo"
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 /db_xref-"MGD:MG1:1905260"
 Matches:
 Length:
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 /protein_id="BAB27493.1"
/db_xret="G1:12847244"
/db_xref="MGD:MG1:97874"
 /organism="Mus musculus"
/strain="US/BL/6J"
 US-08-08-626-459A-44 (1 871) x AKU11345 (1-1364)
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 Carninci,P., Shibata,Y., Hayatsu,N., Suqahara,Y., Shibata,K., Itoh,M., Konno,H., Okayaki,Y., Muramarsu,M., and Hayashiyaki,Y. Normalisation and subtraction of capt trapper selected cDNAs to propage full-lingth sund "tharfies for rapid discovery of new jenes Geneme Res. 16 (10), 1617-1630 (2000)
 Shibata,K., Itoh,M., Alrawa,K., Nagaoka,S., Sasaki,N., Carninet,P., Kornoo,H., Akiydma,J., Nishi,K., Kitsuda,J., Tashiro,H., Itoh,M., Sumi,N., Ishi,Y., Nakamura,S., Hazama,M., Nishine,T., Harda,A., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikeqami,T., Kashiwaqi,R., Yamamoto,R., Matsumoto,H., Sakaquchi,S., Ikeqami,T., Kashiwaqi,R., Yenjiwake,S., Inoue,K., Toqawa,Y., Tawa,M., Ohara,E. Walaniki,M., Yoraya, Y., Ishiyawa,T., Orawa, K., Tanaka,T., Matsunta,S., Kawai, I., Oyaraki,Y., Ishiyawa,T., Orawa, K., Tanaka,T., Matsunta,S., Kawai, I., Oyaraki,Y., Wira,A., and Hayashiraki,Y., Sequencing pipeline with 384 multicapillary sequencer
 Hofmann, M., Hume, D. A., Kamiya, M., Lee, N. H., Lyons, P., Marchionni, L., Mashima, J., Mazarelli, J., Mombaerts, F., Nordone, P., Rinquald, M., Rodriquez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, S. Shibata, Y., Storch, R. F., Suzuki, H., Toyo-oka, K., Wanq, K. H., Weitz, C., Whittaker, C., Wilming, L., Wynshaw-Horis, A., Yoshida, K., Haseyawa, Y., Kawaji, H., Kohtsuki, S.
 Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (FERFN). Identating for Genomic Physical and Chemical Research Ground Sciences Center (6SC), REFNOTATION Research Ground Compunic Sciences Center (6SC), REKN Yokolama Institute 1-7-22 Suchin--Pa. Isstumi-kg, Yukohama, Ramanawa 230-0045, Japan (E-mail:genome-res/4sc.riken.go.pp, 0PP) http://pe.mm.is.iken.go.pp, 77-22 Res/4sc.riken.go.pp, 75-22 Res/4sc.riken.go.pp, 75-22 Res/4sc.riken.go.pp, 75-25 Res/4sc.riken
 Quarkenbush,J.,
 Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
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 Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and
 Carninci,P. and Hayashizaki,Y.
High-officiency full-length cDNA cloning
Moth. Enzymol. 303, 19-44 (1999)
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|                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                |                                                                                                                                                                                                                                                                                    |                                          |            | •                                                         |                                                             | -                                                                 | · =                                                                                                   | 7 =                                                            |                                |                                                                        | - i                                  |
| 3 1 3 1 5 1                                                                                                              | 5 1 5 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5 3 3                          | 2 2 3                                                                                                                                                                                                                                                                              | 5 3                                      | <i>5</i> : | ĝ 5                                                       | 33                                                          | 5 3                                                               | 25 - 25                                                                                               | 5 3                                                            | 5 3                            | 5 3                                                                    | 3 ± 3                                |

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/note-"organ: eye; Vector: pGMV-SFORT6: Site_1: Not1:
Site_2: Sall; Cloned unidirectionally. Primer: Olido dT.
Average insert size 1.75 kb. Library constructed by Life
Technologies.
 Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 cDNA Library Preparation: Lite Technologies, The code Library Arrayed by the CLM.A.B. Consorthum (LLNL.) DNA Sequencing by Aparcount Bioscience Corporation Clone distribution: MGC clone distribution in MGC clone distribution information can be found through the LNLA.E. Consortium/LLNL at:

Plate: LLAMI2263 FOW: m column: 18
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BiH MGC bitp://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
 396 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerlleGluAsn 415
 64 TATTACCGAGIAATGGAATGCATGCIIAAATGAGAAGAAGGAIIALGCALICAAAAT 123
 436 ValValMetAlaThrTyrSerArqSerThrSerClnAsuLeuAspSerClyThrAspLeu 455
 376 AlaValGlyGlnGlyCysValGluIleGlySerGlnArgTyrLysLeuClyValArgLeu 395
 456 SerPheProTrp11eLeuAsnValleuAsnLouAsnLoulysALaPheAspPheTy113sVall11e 475
 4 GCTGLGGGAFAGGGTTGTFGAAATTGGATGAFAGGGATAGAACTTGGAGTFFGGTTG 63
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 Percent Similarity:
Best Local Similarity:
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DKETERIA 109816_S1 mEMA Sequence.
 Mammalia; Entheria; Primates; Catarrhin; Hominidae; Homo.
(1958-8-17-72-7)
Poustka, Wellenreuther, R., Mewes, H.W., Well, B. and Wiemann, S.).
EST (Exists A. Wellenreuther, P. Mewes H.W., Well, B. and Wiemann, S.).
 Eukaryota Motagoa Chordata, Crasilata Vestelista; Eutoloegtomi
 This is the 5' sequence of the clone insert.
Clone Irom S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (DRIZ), Email 3.WiemantGALL Feldelberg.do.
Sequenced by DRIZ (German Cancer Research Center, Section of the Heidelberg Cormang) within the SPNA symmetry or esertion of the
 576 ThrserAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerLeuPheTyrLys 595
 4.16 HysProGinieugluHisTleileirpPhricaPheGinHisThricaGlnAsaGlufyr 635 [HTHHHHHHHHHHHHHHHHHHH]
7.4 CACCCAGAAFTAGAAFATFATFGFGCAQCTHIPPPAGAACAQAQAGAAGAGIAT 783
 HTHTHTHTHTHTHTHTHTHT
124 ALIAAACAALCAAAGGACCGAGAAGGAAGGAACTGATCATTGAAFGFGCTTTGAAFGFGTTTTT 483
 5.46. Ashileur rolleud InAshAshHis ThrAlaAlaAspMet TyrlicuSer ProValArgSer. 555
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 46 GluLeuMetArgAspArgHisLeuAspGlnIleMet@ysSerMetTyralyIle@ys 655
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 Max Planck-Institute for Molecular Genetics
Thnestrasse 73, 14195 Berlin, Germany
Tel: -49-30-84131623
 poustka@mpimg-berlin-dahlem.mpg.dc
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 Contact: Poustka A.J.
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No sl sequence available.
This clone (Mrzyslacush) is available at the RIPD in Berlin.
Please context the RSIPD: Bessourcembentium, Heubnerwey 6. 14659
Berlin-Charlottenburg, GERMANY, Enail Alagedriphide.
 /note="Vector: pTriplEx2; Site_1: SfilA; Site_2: SfilB; cDNA-collection"
 626 LeurhedInHisThrLeuGlnAsnGluTyrGluLeuMetArgAspArgHisLeuAspGln 645
 666 HetlevalThralaTyrLysAspleubroHisAlaValGlnGluthrPheLysArgVal 585 HILLHILLHILLHILLHILLHILLHILL 242 ALMATHILANAWASTATAMANGALTHETTE ALMANAMATTCAAACTGTT 301
 746 Ashtheffyr HeSet ProbadlysSer Profyrings HeSerCluClyteuprotharpro 765
 766 ThrLysMetThrProArgSerArgIleLeuValSerIleGlyGluSerPheGlyThrSer 785
 686 hourhougschuchungraspserfleihevaltheigrasmservalthametehn 705
 482 AACATCTATATTICACCOOTGAAGAGTCCATATAAAATTTCAGAAGGICTGCGAACACACA 541
 542 ACABABATGACTOCAAGATGAGAATGTTAGTATGATTGGTGAATGATTGGGGACTTCT (UT
 122 CITITICASCACACACACAAATSAATAAATAACICATGAGAGAGAGAGATTIGGAGCAA 181
 786 ClaffsPhcClaffsllcAsnGlaMctValCfsAsaSerAspArgValLcaffsArqSer
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 Gaps:
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 Zhore-"Orqan: Skin; Vector: pCMV SPORT5, Site_1: Not1;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kb. Library constructed by Life
 BM453724 B35 bp mRNA linear EST 05-FEB-200.
AGENCOURT, 640274; NIH_MGC_72 Bomo supiens cona clone IMAGE:55228814
 Bomo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaila: Eutheria; Primates; Catarrhini; Hominidae; Homo.
 cDNA Library Preparation: Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Apencourt Bioscience Corporation Clone distribution: MCC clone distribution intormation can be found through the L.M.A.G.E. Consortium/LLNL at:
 543 PystroLonAsplonDroLonTlnAspAspHistbyAlaAlaAspMortyrLonSorDro 552
 954 ValArqSerProlygtygtygtygtysttttfrargalAsns-rffsAlaAsnAladla 572
 HELLELLELLE HELLE
662 GCHGAAGGAAGCAACHTCTAAACHACTGAAAAAACTACGCTTTGATATTGAAGGATGA 721
 493 DeugluArgCysGluHisArgIieMetGluSerLeuAlaTrpLeuSerAspSerProLeu 512
 513 PheAspteutletyeGlusertysAspArgCluCtyPrcThrAspHfcLeuGluserAla 522
 68 TITGATCITATIAAACAATCAAAGGACGGAGAAGGAGCAACTGATCACCTIGAATCTGCT 127
 128 TOTOTOTIANTOTICOTOTOTOCAGANIANTOACACTGCAGGAGAIATGIATGITICICCT 187
 National Institutes of Health, Mammalian Gene Collection (MGC)
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 http://image.llul.gov
Plate: LLAM12206 row: e_column: 07
 243 t
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Tachtodogies "
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 lissue Procurement: AICC/DCID/DIP
 /ordanism-"Homo sapiens"
 Contact: Robert Strausberg, Ph.D.
 Gaps:
 GS 97 026 459A 49 (1-871) x BM453724 (1-835)
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EST 05 PEB 2002
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AGENCOURT_6393544 NIH_MGC_22 Homo sapiens clnn clone IMAGE:5528037
 Eukaryola, Metazoa, Chordata, Craniata, Vertebrafa, Enteleostomi,
Mammalia, Entherra, Primates, Catarrhini, Hominidae, Homo.
(Chases 1 to 1023)
NIH-MGC http://mgc.ncl.nih.gov/.
 27.9
 EMA Sequencina Ly, Ageicourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
 613 LeuSerGluHisProGluLeuGluHisIlelleTrpThrLeuPheGluHisThrLeuGln 642
 673 AspLeuProHisAlaValGlnGluThrPhetysArgValLeuTletysClustudluTyr 692
 693 AspSerileHeValPheTyrAsnSerValPheMetGlnArgkeutysThrAsnIleteu 712
 713 GlnTyrAlaSerThrArgProPro----ThrLeuSerProlleProHistle-ProAigse 741
 728 CCCCTTACAAGTTTTCCCTAGTTTCACCCTTACGGAATTCCCTGGGAAGGGAACCATCC 787
 National Institutes of Health, Mammalian Gene Collection (MGC)
573 ThrGInAlathrSerAlaPheGlifthrGhifysProtoutysSerthrSertauSertau
 593 PhcTyrtystysValTyrArgleaAlaTyrtksArglesAsnihrtkasYsGlaArglaa
 653 GIYITOCYSIYSVALLYSASnTICASploutysPhetysTicTicValIhrALatyrLys
 CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
 731 rProTyrLys---PheProserSerProLeu---ArqII+Pro---GlydlyAsu
 CONA Library Preparation: Lite lechnologies, Inc
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AGENCOUPT_7572631 NTH_M3Y_92 Homo sapiens obun glone imAGE:6044522.
 /note "organ skin Vertor pCMV-SPORT6, Site_1: Net1;
Site_2, Sail, Cloned aniditectionally, Filmer, Oligo dr.
Average insert size 2 kb. Library constructed by Life
 656 tysvaftysasmiteaspledtyschetystletlevalfhratafyrtysaspledfro 675 tillittillittillittillittillittillittilli
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 716 SerihrAraproProThrieuSerProffeProHislleProArgSerProTyrtysPho 735
 736 Prosers-rProfeuArafleProflystyAsnfleTyrfleSerProfeuLysserPro 758
 956 Tyrtyst (ktSerti) uG (ytaqona thriptai hrigsmetthropidangseratigi Letaa. 175
 836 OlyGluSerLysPheGinGlnLysLeuAlaGluMetThrSerThrArgThrArgMetCln 855
 242 GCTAG FLCACCCTTACGGA FFCFFGGAGGGAAFAFFAFFFFGGGGGFFGFGAAGGFCA 301
 ** 2 IAIAAAAITICAGAAGGTCTGCCAA;AAAAAAAAAAGGAATGACTCAAAAATGAAAATGTLA 361
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 856 LystlaLysMetAsnAspSerMetAspThrSerAspLysGluGluLys 871
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 Length:
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 Eskir, da: Metazia, Chirdata, Ciandata; Vertekrata, Estekostom Mammalia; Eurheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 881) whis Methy, Angelia; Highly, Angelia; Highly, Angelia; Highly, Mathinia; Gene Collection (MSC) National Institutes of Health, Manmalian Gene Collection (MSC)
 CDNA Library Preparation, Life Technologies, Inc.
CDNA Library Allayed Ly. The L.M.A.G. E. Consortium (LENL)
DNA Sequencing by Agencent Bioscience Corporation
Clone distribution: MGC clone distribution information can be
 124 BELLOWSTESTANDANDASSSABSTSASAACASSASTSSAGSALGSAAAAAAAAAATA 182
 183 GAAAATGATAAAAATTATTAAAGTTGTGTAAAQAAGATGAATGTAATATAGATGAG 212
 271 AsniysAspicuAspAlaArglcuPhelcuAspHisAspiysThricuClnihrAspScr 290
 363 AAFAAAGATCTAGATGCAAGATTATTTTTGGATGATAAAAAGTGFGGGGALIGE 422
 291 ILeAspSerPheGluThrGlbArqThrProArqLySSerAsbLeuAspGluGluValAsn #10
 208 MetClaAspAspLeuVallleSerPlaCluLeaMetikuCysVallauAspTyrPhcllc 227
 3 ATGGAAGATGGAGTTTGATTTGATTTGAGTTAATGCAGGGCCCTGAGGAGTATTATT 62
 AsnSerLeuGlyLeuValThr
 /tissic_type "emkryboul curchobu, cell line" //lab_host-"DH10B (phage-resistant)"
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Email: cgapbs-r@mail.nih.gov
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 Location/Qualitiers
 Tissue Procurement: ATCC
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mknA linear EST 27-JAN-1998
 Maria,M., Hillier,L., Allen,M., Howles,M., Dietrich,N., Dubuque,T., Garshi,S., Knedbalt, Lary,M., Le,M., Martin,J., Morris,M., Schellenberg,K., Sieptone,M., Tan,F., Inderwood,K., Moore,R., Theising,B., Hylle,T., Lennon,G., Soares,B., Wilson,R., and
 Mammalia: Eutheria: Rodentia: Sciurognathi: Muridae: Murinae: Mus
 Enkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 vw54a04.rl Soares mammary_qland_NMLMC Mus musculus cDNA clone
IMAGE:1247598 5' similar to qb:MI5400 RETINOBLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M26391 Mcdsr relinoblastown sasseptibility
 This clone is available royalty-free through LLNL; confact the IMAGE Consortium (into*image.llnl.gov) for further information.
 131 HelmuAsuSerAlaSerAspGlnProSerGluAsuLeuIleSerTyrPheAsnAsnCys 350
 351 ThrValAsuProLysGluSerIleLeuLysArqValLysAspIleGlyTyrIlePheLys 370
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Washington University School of MedicineP
 430 enAlaCysAlaLenGluValValMetAlaThrTyrSer 442
 Seq primer: 28ml3 rev2 ET from Amersham
 4444 Forest Park Parkway, Mcx MS01, St
 Contact: Marra M/Mouse EST Project.
 /ordanism "Mus musculus"
 Email: mouseest watson.wustl.edu
 protein (MOUSE);, mRNA sequence.
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 The Washu BHMI Mouse ESI Project
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Anote-Tector: pT714b-Pac (Pharmacia) with a modified polyfinker; lst strand cDMA was prepared from mammary quand fissue from a lactation female, and was then primed with a Not 1 - 011q0(df) primer. Double stranded cDMA was ligated to Eco RI adaptors (Pharmacia), disested with Not and Eco RI sires of the modified pf771 vector. Library is normalized. Library was constructed by Hento Soares and M. Earling Bonaldo.
 678 CTAAAGCGGGT-AAGGACGTTGGGCACATGCTTAAAGAGAAGTTTCTA: ACGCTGTGC 623
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 279 PhelicuAspHisAspLysThrLeuGInThrAspSetT1eAspSetTheGinThrOllhArg 298
 914 IITTTGGATCCAGAAIAAACCCTCGAGCTGT - TCCTTTAGGCCTTTTTAAAGCGGAG 857
 856 ACCCCACGGAAAACCACACTIGIT-GAAGAGCCAAACGGGGITAGTAACACCACCAACAGTIT 798
 319 ArqThrValMetAsnThrIlesInGlnLeuMetMetIleLeuAsnSerAlusSerAspGln 338
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 399 ValMetGluSerMetLeuLysSerGluGluGluGluArgLeuSerlleGlnAsnPheSerLys 418
 562 GTGATGGAATCCATGCTTAGATCAGAAGAAGAAGTTTGTCCATTCAGATTTTAGAAA 503
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 459 IrpileLeuAsnValLeuAsnLeuLysAlaPhoAspPhelyrLysVallleCluSerPhe 478
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 322 AFCAAAGTGGAAGCCAACTTGACAAGAGAAHGATAAAAGATTTAGAAAGATGTGAGATT 263
 519 SertysAspArgCluClyProffmAspHisLeuGluserAladysProlauAsnLauPro 548
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 299 ThrProArgLysSerAsnLeuAspGluGluValAsnVallleProProHisThrProVal
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 Fax: +55-11-2207001
Email: asimpson*ludwiq.orq.br
This sequence was derived from the FAPESP/IICP Human Cancor Genome
 HEGBEPATA
RC2 HEGG 210200 014 c06 B10642 Home sapiens GDNA, MRNA Sequence.
BE082846
 Nagai.M.A. da Silva.W. Ir., Zag., M.A., Burdin.S., Costa,F.F., Goldwan, G. H., Carvalho, A.F., Matsukima.A., Raia, G. S., Simpson, D. Hrunstein.A., Gooliveira.P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares.F., Brentaal.F.F., Fels.L.F., Je Sagas.S.T. and
 Fukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia: Butheria: Primates: Catarrhini: Hominidae: Homo
 Laboratory of Cancer Genetics
Endwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
 Shotqun sequencing of the human transcriptome with ORF expressed
839 LeadloAscAsoHisThrAlaAspMe*TyrLeuSerPr=ValArgSerFr=LysLys = 598
 959 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 578
 Proc. Natl. Agad Sri H S A 97 (7), 3491-3496 (2000)
 1 others
 Matches.
Conservativo
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 25 TICCAIACICAGAAGCCAIIGAAA 2
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Mammaliak Eutheriak Podentiak Sciurognathik Muridaek Murinaek Mus.
 AA763485
WWA5400.rl Soarces_mammary_gland_MIMG WMS musculus chore crore IMAGE:1247865 5, similar to qtwM18400 HFTINOHLASTOMA-ASSOCIATED PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma susceptibility
 349 AssCysThrValAssProJysCluSerile.culysA~gVallysAspileClyTyrile 468
 676 CAFTGFACAGASTGAT COMMANDAMOTATATAGTGAGAAGAGGATATAGGATATACATC 618
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 509 AspSerProLeuPheAspLeuIleLysGluSerLysAspArqGluGlyProThrAspHis 528
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 617 TTTAAAGAGAAATTTGCTAGAGCTGTGGGACAGGNELGEGLGGAAAFTGGAFCACAGGGA 558
 469 CluargicuSer HeChrashPheSerigstoube dastaspastr Heitheitismeteer
 489 MetileLysHisLeuGluArqCysGluHisArglleMetGluSerLeuAlaTrpLeuSer
 548 tlyrLeuSerProValArgSerProLysLysLysGlySerThrThrArqVal 565
 Washington University School of MedicineP
 Johnson: Marra M. Medse HST Project
09 SIE-459A-49 (1 871) x BE38284C (1-694)
 protein (MOUSE); mRNA sequence.
AA763485
 The WashU-HHMI Mouse EST Project
 WashU-HHMi Mouse EST Project
 AA753485.1 GI:2813232
 (bases 1 to 871)
 Unpublished (1996)
 Mus musculus
 house mouse.
 Waterston, R.
 DEFINITION
 AA763485/C
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Louis, Mo 63108

4444 Forest Park Parkway, Fox 8501, St.

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First need of the part of the page (Pharmacia) with a modified polylinker; ist strand cDNA was prepared from mammary quand lissue from a lactafing lemmale, and was then primed with a Not 1 - oligo(dd) primer, bouble stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco RI sites of the modified pITTA vector. Library is normalized. Library was coinced by Benio Scares and M. Estima Bonaldo. **
 This clone is available royalty-tree through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
 860 AGCCCAAGGAAAAAAAACCCTTGGGAGGGGCAAGGGGTTTTACCCCCCACAT---CCAG 804
 418 alArqThrValMetAshThrIleGinGinLeuMetMetIleLeuAshSerAlaSerAspG 338
 803 F10G GROSFIFFIRM ACTRODATORATIAGGGGGGTTTFFTAATTIGGGGAAGTATCA 745
 358 TetrottysArgVallysAspileClyfyrilePhetysClyfysPheAlatysAlaValS 378
 884 TOGIAGGAGG BAAGG FGLOGCCAGCOTTAAAAGAGAGGGTIOTTAAGGCFGFG 628
 (78 1)(18 1)
 624 OPPAGOOLIGIGI GAPAIPOGAGIAPAGGGALATACACTI GGAGTP GGALTIGIATTACC 565
 198 raVa. Met GluSer Met Leul, ysser GluGluGluArq Leuser HeClnAsh Phesert. 418
 418 ystantauAsnAspAsnifotheHisMetSert.cottanAlaCysAlatesGluValWalM 438
 438 etAlaThrIyrSerArdSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPheP 458
 458 rolfpiletenAenValtenAenleriysAlaPheAspPheTyrtysVal11FeGluSerp 478
 484 CGTGGALTGTGAAGGTACTTAALTTAAAAGGCTTTGATTTTTAGAAAGTGATTGAAAGTT 325
 299 ThrirtoArd.gsSerAss TruAspSTuCluValAssValtTerrorroHtsthafreV 318
 348 InProSetCluAsnLeulleSetTyrPheAsnAsnCysThrValAsnProLysGluSert 358
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Mismatches:
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/lab host="DH10H"
 Matches:
 Length:
 Indels:
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 monscost Watson, wust Lodu
 Gaps:
 US 99 026 459A 49 (1 871) x AA764485 (1-871)
 High quality sequence stop: 495.
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 Location/Qualifiers
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 80.34%
74.48%
Fel: 414 286 1800
 Fax: 414 286 1810
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 Seq primer:
 MGI:661454
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HGZ54543
02364Z2BET NIH_MGC_90 HOMO Sapiens ChNA clone IMARE:4472611 5:
 Bukaryota, Metazoa, Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia, Entheria; Primates: Catarrhini; Hominidae; Home,
1 (bases 1 to 922)
NIH MS* http://www.nsf.vib.govg.
 Atssue_type "adenocatehnoma, cell_line"

/lab_host="InHIOB (phage-resistant)"
/note="Gorgan: liver; Vector: pcMV Spokfe; Site_l: Notl;
Site_2: Sall; Cloned unidirectionally; olino dT primed.
Average insert size 1.7 kb. Library enriched for full-length clones and constructed by Lite lechnologies.
Note: this is a NHE,MGC Library."
 cDNA Library Preparation: Lite Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Consortium distribution: MGC clone distribution information can be cloud through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
478 helleLysAlaGluGlyAsnLeuThrAraGluMetTleLysHisLeuGluAraCysGluH 498
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ب
 558 ystysctlyrthrarqValAsnserIhrAlaAsnAlaGluThrolhAlaThrSerA 578
 NIH MSP http://www.not.eib.govg.
National Institutes of Health, Mammalian Gene Collection (MGC)
 ж
ж
 198 isArqIleMetGluSerLeuAlaTrpLeuSetAspSerProLeuPheAspLeuTleLysG
 548 roLeuGluAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValAraSerProJyst
 Conservative:
 Mismatches:
 Plate, LLAM1829% row. 1 colomn. 20
 Matches:
 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r*mail.nih.gov
Tissue Procurement: ATCC
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88.54%
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 mRNA sequence.
BG253543
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Best Local Similarity:
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| 59A-49 (1-871) x BG25354          | Tetterphanophedessi<br>Titterintillillillilli<br>ucatergaccititeneaaaaa | HisLeuAspGlnIləMətMətCys.<br>[1]<br>GAFIG-GACCAAATTATGAFGFGF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | oleulysPhelysHellevalThradillill                                    | PhotysardValleuflebysGlud<br>                                                                               | ValPhoMordInAraLeuLysThri<br>                                      | TeuserProffeProffsflePtor<br>                                         | illeproclyclyasniletyrilet<br>THITELLIIIIIIIHHIIII<br>ALIGGIRGAGGAAGARGBART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | CeuProThrProThrCysMetThrl<br>                                                                                    | PheclythrSergluLysPheglm<br>                                         | teutysardseraladludlyser/<br>                                                                                                                         | iledimiyserAspGluAlaAsp<br>                                         | HnGlniysteualaGluMetThrSt<br>!!<br>!HHHHH!<br>AddcAGAAACTGGGGAAAATGACTT                                                                     | AspSerMetAspThrSerAshLysGluGluLys | HM475603 100<br>5. mkNA sequence.<br>FM475603.1 GI:18524645<br>EST.<br>Homen.<br>Homen.<br>Homen.<br>Homen Sapiens<br>Fukaryota: Metazea; Cherdat<br>Mammalia: Eutheria: Primate<br>(bases I to 1001)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| йв:<br>US-( <sup>2</sup> 9-026-4) | 6.2.2                                                                   | 97 /41 4<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | CY (41) P                                                           | 7 181 r                                                                                                     | 20 88 4 GU                                                         | Oy 221 r                                                              | ०४ - ३४१ - ४<br> <br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 45 761 y<br>100 417 b                                                                                            | 181                                                                  | - 128 - 32 - 43 - 5 - 63 - 63 - 63 - 63 - 63 - 63 - 63                                                                                                | 4y 821 p                                                            | Oy 841 G<br>                                                                                                                                | CY 861 A                          | MESTIL: 11 HM4756.3 LOCUSS LOCUSSIL: NVERSIL: NV |

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/note="Organ: testis: Vector: pGMV-SPORT6: Site_1: Not1: Site_2 Sall; Cleard unidirectionally; oliquedT primed. Average insert size 2.5 kb. Library enriched for fall thath clones and constructed by life Lechnologies. Note: this is a NIH_MGC Library."
 cDNA Library Preparation: Lite Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
INA Sequencity by Agentical Bissolies. Carporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov.t.column: 04
High quality sequence stop: 734.
High quality sequence stop: 734.
 174 uThrGlnProSerSerSerIleSerThrGluIleAsnSerAlaLeuValLeuLysValSe 194
 194 rTrpIleThrPheLeuLeuAlaLysGlyGluValLeuGlnMet.GluAspAspLeuValI1 214
 398 GOORGROOT ARRANGE AND ARRANGE AND ASSESSION AS TO A GOOR AND A STATEMENT AND A STATEMENT AS TO A S
 135 LeuLysGluIleAspThrSerThrLysValAspAsnAlaMet.SerArgLeuLcuLysLys 154
 218 TTGGATCACATTTTTATTAGCTAAAGGGGAAGTATTACAAATGGAAGATGATCTCTGGTGAT 277
 458 TGAAGTTGTGTAAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAA 517
 38 GTCGGGTAAITGAIAGCAATAGCAAAGTIGAIAHHHHHHHHHHHHHHHHHHHHHHHHHHH
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 234 aleulysGlaFroTyrLysThr--------GlySer-----
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Conservative:
Mismatches:
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 US-09-026-459A-49 (1-871) x HM475603 (1-1001)
 Contact: Robert Strausberg, Ph.D.
 Gaps:
 Email, cgapbs:r@mail.nih.göv
Tissue Procurement: AICC
 6.56-88
989.50
75.48%
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 Percent Similarity:
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linear EST 29-APR-1999
 CDNA was
 polylinker; 1st strand cDNA was prepared from mammary gland tissue from a lactating temale, and was then primed with a Not 1 - oligo(dT) primer. Double stranded cDNA was ligated to Peo Pt adaptors (Pharmacia), digested with Not 1 and cloud into the Not 1 and Ecc Pt sites of the modified p1713 vector. Library is normalized. Library
 Mammalia: Futheria: Rodentia: Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 842)
 Library
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
 This clone was previously sequenced on the 5' end only, this new
 Email: chapbs remail.nih.gov
This clone is azailable royalty-free through LINE;; contact the
 modified p1713 vector. Library is normalized. Library
was constructed by Bento Soares and M. Fatima Bonaldo.
 IMAGE Consortium (intodimage.llnl.gov) for further information.
 /orbital libe"scares_mamming_aland_NMLMC.
//sex="Temmle (lactaling)"
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//ishue host="HHIOB"
//note="Vector: p1713D Pac (Pharmacia) with a modified
 578 FGAAAATGTFGTAAAGGATAAGAAATTTATGTTAAAAATAAAGATGTAGAAG 637
 HELLITTELLEGALCALGALAAAACLCITGAGATICHATHITITTELLITTELLITTELLITGAACACA 697
 297 nArqThrProArqLysSerAsnLeuAspGluGluValAsnValIleProProHisThrPr 317
 698 GAGGAACACACAAAAAGTAAGGTTGATGAAGAGGTGAATGTAATTIGGTGGAGAGTGG 757
 417 oValArqibi VaiMet Asuibi LieGinGinizouMet MetillerauAsuserAlaSerAs 337
 758 ASTIAGGACTOTIATGAACACIATATCCAACAAITAATGATGATTIIAAAITCAGCAAGTGA 817
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 956 uSerilleLeuLycArgValLysAspileGlyTyrile...-PheLysGluLys- 372
257 TGTuAsnikuSertysArqfyrGTuGTuTTeTyrt.cuTysAsniysAspileuAspATaAr 277
 878 AAAGCIATAACGGAAAAAAGGGTAAGGAATATAGGAATAACGTGGTTTTAAAGAAAAAA 937
 A1646038 Hara EST 29-APR VW54019.8 Soares_manmary_eland_NMLMC Mus muserlus cDNA clone IMANE:1247710 3 similar to dp:M26591 Mouse reticoblastoma susceptibility protein (MOUSE);, mRNA sequence.
 277 queurhoteuAspHisAsptysthrt.euGlafhrAspSerlleAspSerrheGlafhrGl
 NOT CGAP http://www.nobi.nlm.nib.gov/neiegap.
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 Contact: Robert Strausberg, Ph.D.
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 Tumor Gene Index
Unpublished (1997)
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 Mus museulus
 house mouse.
 MGI:661298
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 AW 108234 588 Dp. mkNA libear ESI 04 FEB 200 CM3-HF0181-181099-023-e10 HF0181 Homo sapiens cDNA, mKNA sequence. AW368234
 229 keutysvalkeuasphyrphetlelysbeaserProboachemia Light 1899 ::::[[]]]::::[]]]
 62 GAAGAGCIGGCCTGGCCAGGCTTGAGTTLGAAGAAATTGAAGAAATTTATTGCA 121
 241
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 302 CTACAGAAAGCATAGAAACCAGIGTCTAIAAAHICTIIGACHAATAAAAAAHAAAHAAA
 140 ThrSerfhrtysValAspAsnAlaMetSerArgLeutzetgstgstgrAspValLeuthe 159
 160 AlakeuPheSerlysLeuGluArqThrCysGlukeuTleTyTkeuThrGlubroSevSev 179
 422 GCACTETACAGCAAATTAGAACGGACGTCTGGACTTATATATETGACACAAAACTAGCACT 481
 180 SerileSerThrGluIleAsnSerAlaLeuValLeuLysValSerTrpHeThrPheteu 199
 482 GCGTTATCTACTGAAATAAATICIATGTTGGTGCTAAAAATITGTTGGATGACTTTNTTA 541
 542 CTAGCTAANGAGAAGTATTACAGATGGAAGATGACCTGNTAATCTCAATTCACTAATG 601
 60 LeuCysGlatysLeuLysIleFroAspHisValAraGluAraAlaTrphæuThrTnpmin 79
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 20 ProproAlaProProProProProProProfluGluAspProGluGluAspSerGlyPro
 40 GluAspLeuProLeuValArqLeuGluPheGluGluThrGluGluProAspPhetThrAta
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 Matches:
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176 c
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 Percent Similarity:
 Aliqnment Scores:
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16 AlaAlaAlaGluProProAlaProProProProProProProGluGluAspProGluGluGl
 US-09-026-459A-49 (1-871) x A1646097 (1-709)
 Best Local Similarity:
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 Anotes "Organ: Read_neck, Vector. puel8, Site_1. Shal, Site_2: Smal; A mini library was made by cloning products Site_2: Smal; A mini library was made by cloning products delived from ORENTS PPR (I.S. Letters Patent application No. 166.716 - ludwig Institute for Canner Pesearch) profiles into the pile 18 vector Peverse transcription of tissue mRNA and cDNA amplification were performed under
 This sequence was derived from the FAPESPALICE Human Cancer Genome Project. This entry can be seen in the following THM (HITE WAY) JOHN TO BE SETTING THE FOLLOWING THM (HITE WAY) JOHN THE PLOTE PLATE FOR THE PROPERTY OF TH
 Eukaryola, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia: Puthoria, Pilmatos, Gatarhíni, Becinidae, Hyme, 1 (bases 1 to 588)
HCCP http://www.ludwig.org.br/ORPSIPS
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Fax: -55-11-2707001
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 Email: egapbs-r*mail.nih.gov
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
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HLOSUM62 Scoring table:

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### SUMMARIES

| Score<br><br>575.5<br>1551 | Mateh<br>45.0        | Match Length<br>45.0 [364<br>34.5 [05]     | ======================================= | ID<br>AKU11246<br>BMS61083            | Description AKG11246 Mus muscom AMS61983 AGLANS ORE              |
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 Marchionni, L., Mashima, L., Mazzarelli, J., Mombaerts, F., Nordone, P., Rind, H., Rind, M., Rodriguez, L., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K. F., Suruki, H., Toye-cka, K., Wang, K. H., Weltz, C., Whittaker, C., Wilming, L., Mynshaw Borts, A., Yoshida, K., Haseqawa, Y., Rawaji, H., Kohtsuki, S., and Hayashizaki, Y.
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 Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (PTKEN). Laboratory for Goromo-Exploration Research (FTKEN). Laboratory for Goromo-Kryloration Research (FTKEN Genomic Sciences Center (GSC). RIFEN York-bana Institute: 17-72 Stabino-cbo Tsurumi-ku. Yokchama. Kanagawa 210 0045, Japan (E.mail.genome-residec.ilkeh.go.jp. URL:http://genome-gsc.ilkeh.go.jp.
 Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
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| 40                  | 7 4 4           | GCTAAAGGGAAAGTATTACAGATGGAAGATGACCTGGTAATCTCAGCTAATGTTG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 792          |
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| ÷.                  | 3 6, 6          | TGTGTAGTTGACTATTTALTAGTTGTCACCTCCTGCACTTAGTTAGAGGCCATACAAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 852          |
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Please contact the RZPD: Ressourcencentum, Heubnerweg 6, 14059
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 Email: poustka@mpimerberlin-dahlem.mpg.de
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Mammalia; Eutheria; Primates, Catarihini, Hominidae, Homo.
 644 | Temet Met CysSet Met Fynd Lyflecystys Vall ysasin Least-Leudysthelys (63 | HILLI HIL
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 <u>†</u>6.1
 704 Arquentys ThrAsh HebeughntyrAlaser thrAtqerotto that tenser erotte 723
 744 AshillefyrilleserProteulysSerProtyrLysilleserGluGlytepProthiffo 763
 482 AACATCTATATTTCACCCCTGAAGAGTCCATATAAAATTTCAGAAAGGTCTGCCAACACCA 541
 784
 784 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLysArqSer 803
 NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammadian Gene Collection (MGP)
 Clone distribution: MGC clone distribution information can be
122 CITITOGAGCACACCOCTGCAGAATGAGIATAGAACTCATGAGAGACAGTTGGACCAA 181
 CDNA Library Preparation. Life rechnologies, Inc. cDNA Library Arrayed by: The L.M.A.C.E. Consortion (ITNL) DNA Sequencing by: Ageneourt Bloscience Corporation
 684 LeutletyschuchdrutyrAspSerfletteValPhetyrAsnserValPheMetGlin
 764 ThriysMetThrProArgSerArgileLouValSerlleGlyGluSerPheClyThrSer
 found through the f.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Plate: LLAM12206 row: e column: 07
 Tissue Procurement: ATCC/DCTD/DIP
 Contact: Robert Strausberg, Ph.D.
 /organism="Homo sapiens"
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 High quality sequence stop: 647.
 Location/Qualitiers
 Email: cqapbs-ramail.nih.qov
 BM453724.1 GI:18502764
 (bases 1 to 835)
 Unpublished (1999)
 . B
 Homo sapiens
 BM453724
 824 AspClu 825
 722 CAIGAA 727
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/note-"organ: skin; Vector: pGNV-SPORT6, Site_1: NotI; Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT. Average issert size 2 kb. 'ibrary constructed by Life Technologies.' 137 g. 233 t. I others
 UH TILLITTI HITTILLI
 491 LeugluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 510
 [41] PheAspLeutletysClnSertysAspArgCluClyProThrAspHisteuCluSerAla 530
 131 CysterolouAssicoptolouGuasrAssHisThrAlaAlaAspMctiyricuScrPto 559
 -51 ValAraSerProfysfysfysfysflySerThr?thrAraValAshSerThrAlaAshAlaGlu 570
 69] PhotyrtystysValTyrArdfouAlaTyrfouAngrouAseThylogOysO'gArgfou 610
 411 LeuserGluHisProGluLeuGluHisIleIleTrpThrLeuPheGlnHisThrLeuGln 630
 THEFTER THE THEFT HE
 63) AsnGlulyrCluicuMetArqAspArgHisLcuAspGlulieMetMetCysSerMetTyr 650
 651 GIYTTCCTSILTSNatLTSAStTTCASplicatysThetTysTTGTTCValThrAlaTyrtys 670
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(1717] [117] [1117] [117] [117] [1117] [1117] [1117] [1117] [1117] [1117] [1117] [1117] [117
 (9) AspSetflelleValPheTyrAsnSerValPheMetGlnArgLeuJysThrAsnIleLeu 710
 CONTROLLEMENT CO
 188 GTAAGATGTGGAAAGAAAAGGTTGAAGTAGGGGTGTAAATTGTAGTGGAATGCAGAG 247
 428 AAISAGIAIGAACTCAIGAGAGAGAGCATTIGGACCAAATTAIGAIGTIGCAIGTAI 487
 548 GATCLICCLCAFGCFGTFCAGGAGACATTCAAAGGTGTFTFGATGAAAGAAGAGGAGTAT 607
 11 CintyralaSerthrargProPro---ThrLeuSerProffeProHistle-ProArgSe 729
 458 NACHALICETTICEACCAGGCCCCCTACCCTTGTCACCAANTACCTGACATTTGCTCGAAG 727
 29 rProlyrLys - PheProSerSerProLeu - ArqllePro---GlyGlyAsn---- 744
 1 others
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 Conservative:
Mismatches:
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 Matches:
 Indels:
 Length:
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 Gaps:
 UN W-26-459A-47 (1-869) X HM453724 (1-835)
/clone-"IMAGE:5528814"
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ACENCOURT 6393544 NIH_MGC_72 Homo sapiens cDNA clone IMADE:5528037 BM450031
 /Lissue_type-"melanotic melanoma"
/lab_host="DH10B (phage-resistant)"
/note="Organ: skin; Vector: pCMV-SPORT6: Site_1: No!1:
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Avenage insert size 2 kb. Library constructed by inte
 Eukaryota, Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1023)
 cDNA Library Preparation: Life technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.F. Consortium (LLNL.) BNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution can be
 National Institutes of Health, Mammalian Gene Collection (MGC)
 694 IleValPheTyrAsnSerValPheMetGlnArqLeuLysThrAsnIleLeuGlnTyrAla 713
 714 SerThiArqProProThiLeuSerProlleProHisileProArqSerProTyrLysPhe 733
 734 ProSetSetProLeuArg11eProG1yG1yAsnileTyr11eSetProLeu.ysSd8frro 753
 2 AAAGTGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGCATACAAGGATCTTCCT 61
 654 LysValLysAsnileAspLeaLysPheLysileileValThrAlatyrLysAspLeuPro
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 found through the I.M.A.G.E. Consortium/LENL at: http://image.llnl.gov
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 281 t
 Matches:
 Indels:
 Email: cqapbs-remail.nih.qov
Tissue Procurement: AICU/INID/DTP
 "orqanism "Homo sapiens"
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 US-09-026-459A-47 (1-869) x BM450031 (1-1023)
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 Location/Qualifiers
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 BM450031.1 GI:18499071
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 Best Local Similarity:
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 Percent Similarity:
 human
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 Query Match:
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 RESULT 6
 BM450031
 KEYWORDS
 FEATURES
 VERSION
 ORIGIN
 Score:
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1 (bases 1 to 914)
Marra_M., Hillior,L., Allen,M., Howles,M., Dietrich,N., Dubuque,T.,
Geisel,S., Kucaba,L., Lacy,M., Le,M., Martin,J., Morris,M.,
Schellenberg,K., Steptes,M., Pan,F., Hiderwesk,K., Moze,B.,
Theising,B., Mylie,T., Lennon,G., Soares,B., Wilson,R. and
 Anatom Voctor pTTT Great (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary dland tissue from a lactating temale, and was then primed
 Mammalia: Butheria: Rodentia: Sciurognathi: Muridae; Murinae; Mus.
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 vw54a64.1) Soutes manmary_gland_NMLMG Mus musculus clund clone
lmAdE:1247594 5 sim.lat to qb:MI5400 RETINOBLASIOMA-ASSOCIATED
FROTEIN (HIMAN): qb:M26.91 Mouse relinoblasiona susceptibility
Frotein (McGSE); mRNA sequence.
 Email: mouseest @wdfson.wustl.edu
This clone is available royalty free through LLNL; contact the
 814 LysLysLeuArgPheAspIleGluGlySerAspGluAlaAspGlySerLysHisLeuPro 833
 IMAGE Consortium (intomimage.llnl.gov) for further information.
754 TyrLysTleSorGluGlyLeuProThrProThrLysMetThrProArqSorArglleLeu 773
 182 AAAAAACTACGTTTTGATALIGAAGGALCAGATGAAGCAGATGGAAGTAAACATCTCGCA 541
 8.34 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 853
 102 TATAAAATI IMAGAAGIM GOGAAMAGGAAGAAAAAIGACIGCAAGAATGTTA 361
 Washington University School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, Mo 63108
 854 TystilulysMet AshAspSerMetAspThrserAsmTystHuffullys 869
 Linear
 /clone_lib="Soares_mammary_qland_NMLMG"
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Seq primer: -28ml3 rev2 ET from Amersham
 m KNA
 /sex "female (lactating)"
/lissertype "mammary gland"
/lab_host-"DH10B"
 Unpublished (1996)
Contact: Marra M/Monse ESF Project
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/db xret-"taxcu-1000c-"
 The Washi BHMI Mouse ESI Project
 914 bp
 High quality sequence stop. 422
Location/qualitiers
 /clone-"IMAGE:1247598"
 Washu HIMI Mouse EST Project
 AA764411.1 G1:2814158
 414 286 1800
 Fax: 314 285 1810
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 Mus musculus
 house mouse.
 Waterston, R.
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With a Not 1 oliqo(d1) primer, bouble stranded cbNA was ligated to Bro RI adaptors (Pharmacla), digested with Not 1 and cloned into the Not 1 and Eco BE sites of the modified pTTT4 vector. Library is normalized. Library was constructed by Bento Soares and M. Falima Bonaldo. " 178 c. 217 q. 261 t. Lothers."
 17 ArqThrValMetAsnThrIleGlnGlnLeuMetHetIleLcuAsnSerAluSerAspGln +36
 797 TGGGCTGTTTTGGAACCIAICCAACAAITIATTGTGATTTTAAACTOOGOAATGACGG 738
 737 CONTORGAMINICIGII - LOCATOTATALIGACIO COGINACOCARAGAAATICO C. 679
 557 LeulysArqValLysAspileGlyTyrilePheLysSlsLysPheAluLysAlaValGly 476
 678 CTAAAACCOOT AAGGACT LOODCACATCTTAAAGAAAATTTCTA - ACCCTOTOC 623
 36.1
 622 CCAGGCTGTGTGACCATGGGAGTACAGGATAIAAAATITTGAGTGGGATGTAFFGT 563
 997 ValMetGluSerMetLeuLysSerGluGluGluGluGluHarqLeuSerlleGluAssEPheSerLys 416
 562 GTGATGGAATCCATGCTTAGATCAGAAGAAGAACGTTTGTCCATTGAGAATTTTAGCAAA 503
 417 LeuLeuAsnAspAsnIleFheHisMetSerLeuLeuAlaCysAlaLeuGluValValMet 436
 437 AlaThrTyrSerArgSerThrSerGluAsuLeuAspSerGlyThrAspLeuSèrPhePro 456
 457 Trp11et.cuAsnVal1.cuAsnt.cu1.ysAlaPheAspPhetyr1.ysVal11eCluSerPhe 476
 ÷7;
 477 IleLysAlaGluGlyAsnLeuThrArgGluMetIleLysHisLeuGluArgCysGluHis 496
 497 ArqiləMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeutleLysuSln 516
 262 CGAATGATGATGCCTTGCATGCTTTGAGATTCACTTTATTTGATGTCALTAAGAG 20*
 202 TCCAAGGATGGAGAAGGACTT--GATAACTTGAACTTGGTTTGTCTCTCTCTCAGGCTGGCTT 146
 537 LeuglnAssAsnHisThrAlaAlaAcpMetTyrLeuserProValArqSerProLystags 556
 277 PheticuAspHisAspLysThrLeuGlinthrAspSerilleAspSerPheGlinthrClinArg 296
 856 ACCCCACGAAAACCACCTIGI GAAGGGCCAAAACCGGTIACICCCAAAACCGGTI
 377 GlnGlyCysValGluIleGlySerGlnArqTyrLysLeuGlyValArqLeuTyrTyrArq
 442 GCTACGTATAGCAGAAGTACATTGCAGCATCTTGATTCTGGAACAGATTTGTTGCTTFCCC
 517 SerLysAspArgGluGlyProThrAspHisLendluSerAlarysProLenAsuLenPro
 297 ThrProArgLysSerAsnLeuAspGluGluValAsnVallleProProHisThrProVal
 337 ProSerGluAsnLeutleSerTyrPheAsnAsnPysThrValAsnProLyst)TuSerTle
 Conservative:
Mismatches:
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 Gaps:
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 Berlin/Germany) within the cDNA sequencing consortium of the German
 Eukaryota, Metawoa, Chordata, Craniata, Vertebrata, Enteleostomi;
Mammalia; Eutheria; Primatos: Catarrhini; Heminidae: Hemo
 Clone from S. Wiemann, Molecular Genome Analysis, German Cancer Roscarch Center (DKF2); Email s.wiemannådkiz-heidelberg.de; sequenced by BMF2 (Blomedical Research Center at the Charite,
 This clone (DKE2p313F032) is available at the K2FD in Berlin
Please contact the R2PD Pessourcenzentrum, Heubnerweg 6, 14059
Berlin-Charlottenburg, GPRMANY: Email: clone@rypd de
 /lab_host_"bH10B"
/Actor. pTriplEx2: Site_1. SfitA. Site_2 StitB
 EST (Koehrer, K., Beyer, A., Mewes, H.W., Weil, B. and Wiemann, S.)
Unpublished (1999)
 17 LysGlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 576
 215 GloValleyCystysSluffissloCysAsplicAspGluVallysAspValTyrPheLys 235
 61 AATTITATAGGTTTTATGAATTGTGTTGGAGTTGTAAAGATGTAATGGAGTTGCAGAGGTT 120
 236 AsuPhelleProPheMetAsnSerLeuGlyLowValThrSerAsurlyLouProGlyval
 1 (bases 1 to 605)
Koehrer,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.
 Am Kingforspitz 18a p 82152 Martinsried, Germany This is the 5' sequence of the clone insert
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 106 g
 577 PheGlnIhrGlnLysProLeuLys 584
 25 IFCCAIACTCAGAAGCCAITGAAA 2
 No sl sequence available
 A1.599643.1 G1:15162921
 1037.00
 1.24e-90
 92 c
 100.008
 Contact: Koehrer K
 23.03%
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 Cenome Project
 Home sapiens
 Loral Similarity:
 228 a
 A1.5596633
 Percent Similarity:
 human
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Anote "Gigan, brain, Vestor, pCMVSPART 6, 1st strand oDNA was primed with a Not1-olygo(df) primer. Five prime end enriched, double stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pcMVSPORT 6
 Enkary-da, Metazea, Cherlata, Craniata, Veitekrata, Euteleostomi:
Mammalia, Eutheria, Pithates, Catarihiai, Hominidae, Homo.
1 (bases 1 to 792)
Li,W.R., Gruber,C., Jessee,J. and Polayes,D.
 296 ArgihrProArgiysSerAsnLeuAspGluCluVa.lAsnVallieProProHisthr.Pro 335
 241 AGAACACCACGAAAAAGTCTTGATGAAGAGGTGAATGTAATTGCTCCACACACTCCA 300
 356 HolicutysArgVallysAspillcOlyTyriloPhotysClutysPhoAlatysAlaVal 375
 481 GGACAGGGTTGTGTGGAATTGGATGAAGCGATACAAAGTTGGAGTTGGCGTGTATTAC 540
276 LeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGlaThrGln 295
 336 GlnProSerGluAsnLeulluSerIyrFheAshAshCysIhrValAshFroir\rhociuser
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 Foli-length cona libraries and normalifation Unpublished (2001)
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 601 AAA 603
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 224 ClufysAsnileAspeluVallysAsnVallyrPhelysAsnPhelleProPheMetAsn 242
 26.9 Gludla Hetyr Gedlys Asalys Asplea Aspala Arques Pheleu Aspalys 26.2 (1914) | Helle Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle | Helle |
 545 GARGAALTITIGITAAAALAAAGATGFAGAFGGAAGAFTATTIFIOOWICAFGAFAAA 486
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 424 HedlinGlinLeuMetileLeuAsnSerAlaSerAspGlipFroSerCliAsnLeuIle 342
 305 FOY IMTERITACOMORGEGOACHGNATCCAAAAGAAAGTATACTGAAAAGGGGGGAAT 246
 HITTE HITTELLE HITTEL
 4.22 TO PhothisMet Serient cuAla@ysAlai.cuGluValValWalMetAlaThrfyrSerArg 441
 1d3_AlaVa111eProlloAsn61ySerProArq1hrProArq61y61nAsnArqSerAla_202
 24 t sertizud (gizerval Hir SerAsnd (gizer troblioVat GluAsnilæuser LysArgflyr - 26.2
 303 JanuaspellueluvalasuvallieProProProHisThrProValarqThrValMetAsuThr 322
 (4) SerlyrPheAshAshCysThrValAshProtysGluSerl1eLeutysArgVallysAsp 362
 363 HeelyttittebbeigsalutgsbealatgsAlavalGlyCluGlyCysValGlutte 382
 402 entysseretnettuetuargieusertteetnasnikeisertystæukeidan aspasn 421
 HITHITE HITHITH HITHITHIT THEITHITHITH
 203 ArqileAlaLysSluLesSluAsnAspTErArqileIleSluValLeuCysLysSluHis
 665 GAATGIVATATAGWIGAGGIGAAAAATGITIWITICAAAAATTITIALACCITITATGAAI
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 Matches:
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 49 026 459A 47 (1 869) x ALS64757 (1 792)
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 RE082846.1 GI:8473151
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Dias Noto, E., Garcia Correa, R., Verjockki Almenda, S., Briones, M.K., Nagai, M.A., da Silva, W. Jr., Zaqo, M.A., Bordin, S., Vosta, F.F., Goldman, G.H., Garvalho, A.F., Matsukama, A., Baiat, G.S., Simpson, J. Brunslein, A., devliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.K., Reis, L.F., de Souza, S.J., and
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 This sequence was derived from the PAPESDZLICK Human Cancer denome-
project. This entry can be seen in the following URL
(http://www.ludwin.org.hr/seripto/jechtmili.jlicii atz FC2 BT0642 zlo
200-014 e06841 2000 02 18644-1)
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 Homo sapiens
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Mammalia; Eutheria; Primates; Catarthini; Hominidae: Homo.
 Ludwig Institute for Cancer Research
Rua Prof. Autonio Prodente 109, 4 andar, 01509 010, Sao Paulo SE.
 Simpson,A.J.
Shotqun sequencing of the human transcriptome with oRF expressed
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 406
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 617 ITTAAAGAGAATTGCTAGAGCGGGGGACAGNIGIGIGIGGAAAIGAGAIGACGA
 Proc. Natl. Acad. Sci. U.S.A. 97 (7), 4491-4496 (2000)
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High quality sequence stop: 669.
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 Laboratory of Cancer Genetics
 Bmail: asimpson fludwig.org.br
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 20202663
Contact: Simpson A.J.G.
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1030.u0
 Tel: +55-11-2704922
Fax: +55-11-2707001
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 Percent Similarity:
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Mellon, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D., Wyile, I., Martin, J., Histals, A., Schmitt, A., Theising, H., Ritter F., Konko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, K., Isagareiskyili, R., Williams, J., Tarksen, Y. and Hawars, Y. Washi Harvard Pancreas EST Project
 EST 13-MAP-2002
 Libraries were constructed by Dr. Bouglas Melton DNA sequencing by, Washington University Genume Sequencing Center For information on obtaining a clone please contact: Juliana Brown (brown das.harvard.edu)
 Harvard University, Howard Hughes Medical Institute
Dopt of Molecular and Collular Riology, 7 Divisity Avo, Cambridgo,
 Eukaryoča; Metanoa, Chordata, Cranjuta, Vertebruta; Luteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 This sequence now available from the IMAGE consortium, for clone orders contact: info@image.llnl.gov
 AW583181 6ST 13-MAP-2
Fallin95-yl Haman Pancteatic Islets Homo sapiens obna clone
IMAGE: 638049 F. similar to jb.w15490 PFTINORIASTOMA ASSOCIATID
 PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma ASS@CLATHE profein (MOUSE);, mKNA sequence.
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 4.17 TTATTGGGGTGGGGCTGTGAGGGCGACATATAGCAGAAGTACATCTCAGAAT 378
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 197 GATTCACCTTIATTTCATCTTATAACAA HAAANSAWWAAAAWAAWAAYAATGATOAW 148
 C2 - COCHESCARISORNICONASCION PROFONGINASCASMHISCHRAIAALAASPMC 546
 Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
 (46 (TyelorsorPerValAegorPerTystystystystystytystyty) 563
(HTFFFH) HTHHHHHHHHHH 11
77 STATCHESCOGGAAGAFFECTAAAAGGETTAAAAGGETTAACHACGET 26
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871 bp mRNA linear EST 27-JAN-1998
w45401.11 Soares_mammary_gland_NNDMO Miss misserials clune to the tone
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PROTEIN (HIMAN): gb.M26491 Mouse retinablastoma susceptibility
 Size selected by column fractionation;
 /note-"organ: Pancreas; Vector: pSPORT1; Site_1: Not 1: Site_2: Sal 1: Library constructed using SuperScript Plasmid Library kit (Life Technologies). cDNA made by
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 123 ACTICCAGACTICAAAAICTIICIAAACGAIACGAA GAATTIAICTIAAAAAIAAAA 182
 351 nProLysGluSerIleLeuLysAigValLysAspileGlyTyrIleFbeLysGluLysPh 371
 251 yleuProdisValdisAssieuSertysArgTyrdisdistleTyrLoulysAsntysAs
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Indels:
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 Length:
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 109 q
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 Protections of the part (Pharmacia) with a modified polylinker; 1st strand cDNA was prepared from mammary daland tissue from a lactating lemale, and was then primed with a Not I = Oilgo(dT) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the meditied pi7Ts vector. Library is normalized. Library was constructed by Bento Soares and M. Fatima Bonaldo. "
 1 (bases 1 to 871)
Marta M. Hillbrill Alben, M. Howles, M., Dietzich, N., Dubaque, T.,
Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M.,
Schellenberg, K., Stepler, M., Jan, F., Underwood, K., Moore, B.,
Ihetsing, K., Wylie, L., Lennon, G., Soares, H., Wilson, K., and
 Mus mosculus
Enkaryota: Motazoa: Chordata: Craniata: Vertebrata: Enteleosfomi:
 Mammalia; Entherna: Rodentia; Sciuroquathi; Muridae; Murinae; Mus
 this clone is available royally-free through LLNL; contact the LMAGE Consortium (into dimage.llnl.gov) for further information.
 LeuAspGlaGlaValAsnVallleProProHisThrProV 316
 (16 a)ArqThrValMetAshThrIleGinsInLeuMetMetJieleuAshserAlaserAspg 336
 89 4 FIGG GCGTTTTTGATA/IA/TCCACCATTAGGGGGGTTTTTAAFTTGCCCAAGTATCA 745
 4.6. InProserGluAsnisorTeserTyrPheAsnAsnCysThrValAsnProLysGluSert 356
 44 GOSARSSANAATSTELBITCSSTSSTSSATATGISSASAAGAAAAGAAATS
 esk letentysArqVallysAspilesiyTyrilePhetysGluLysPheAlaLysAlaValG 376
 684 1001 ANGAGITTAAAGGTT STEEGEGETTAAAAGAGAGGTTGTTAACGCTGTGG 625
 HEN ANTICTAAGGAAAAAAACTICTI (GOGAGGGGTCAACGGTTTAGGGGGGGAGAI - -- CGAG - 804
 Washington University School of MedicineP
Washington University School of MedicineP
4444 Forest Paik Parkway, Rox 8501, St. Louis, Mc 63108
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Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
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 DNA Sequencing by: Incyte Genomics, Inc.
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 516 InSertysAspArqCluGlyProThrAspHisLeuGluSerAlaCysProLeuAsnLeuP 536
 204 AGTCCAAGGAIGGAGAAGGACCT - GATAARCTIGAAGCTGCTTGTTGTCTGC 148
 536 roLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerProValArqSerProLyst. 556
 NIH-MGC http://mgc.nci.uih.gov/.
National Institutes of Health, Mammallan Gene Cellection (MGC)
 116 ysLeuLeuAsnAspAsnIlePheffisMetSerLeuLeuAiaCysAiaLeuGluValValM 436
 444 IGGCTACSTATAGCAGAAAGTACATIGCAGCATCTIGATICIGGAACAGATTIGTCCTTCC ABS
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624 GCCAGGCTGTGTGACATCGGAGTACAGGATATACACTTGGAGTCCGATTGTATTACC 565
 496 rgValMetGluSerMetJæul:ysSerGluGluGluAralæuserTfedluAsid+aserF. 416
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 * 59 plentysthetysilelleValThrAlaTyrLysAspLeuProHisAlaValGlnGlnTh 679
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 297 JELIGEGACGAA FACCECACATECCECGAAGCCCEFFACAAGTTTCCEAGTTTCACCCTTTACG 356
 69 ytogprothrermintysmerthrergserargiteteuvalserttestystuse 779
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 FIG. PAGGPAGAAACTGGGGAAATGAFTTGGAAAAAGAAATGGCAAAGCGAAGATGAAT 715
 838 slasinLysLenAladluMetThrSerThrArgThrArgMetGlbLysGlbLysMetAsn 858
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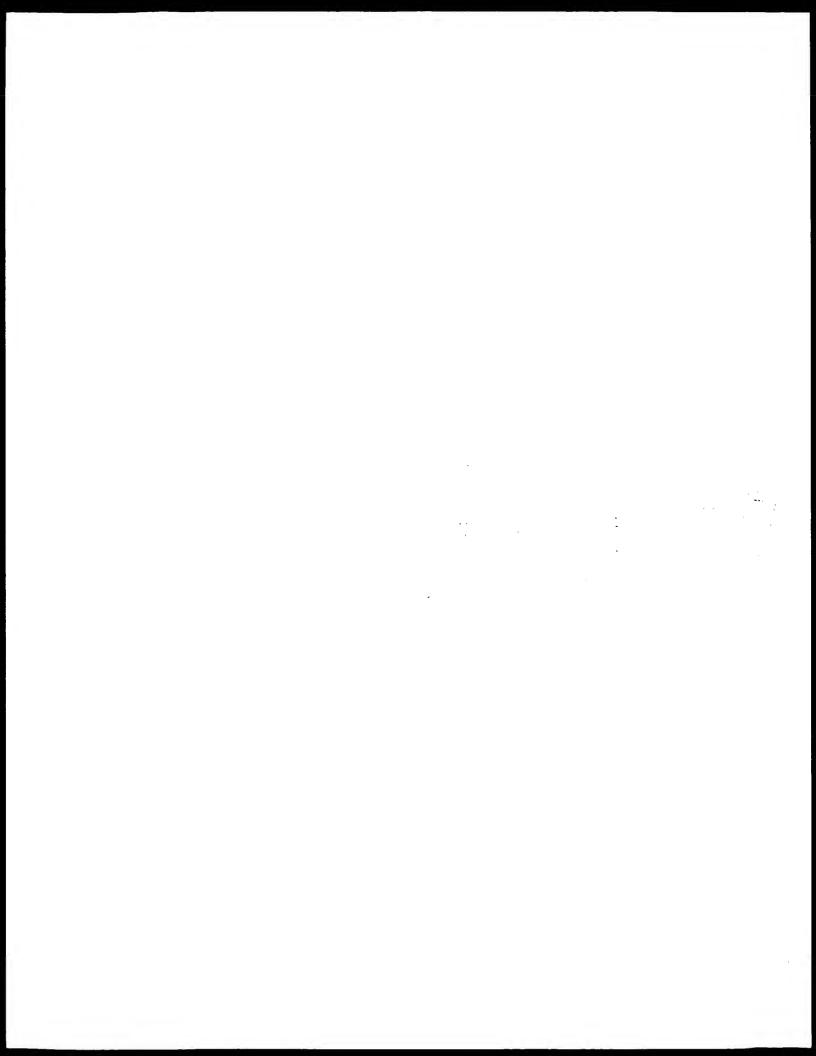
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 38 CTCCGACTAATTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTTGTTGAAGAAG 97
 cONA Library Preparation. Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
 218 TEGGATGACAPETETETAGGTAAAGGGGAAGTATTACAAATGGAAGATGALCTGGTGAL
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 Contact. Robert Strausberg, Ph.D. Email: cgapbs rémail.nih.gov
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 Email: asimpson fludwig.org.br
This separate was derived from the PAPESP/LICE Human Cancer Genome Project. This entry can be seen in the following URL (http://www.loawin.com/br/com/Ers/feltmill/plul offsatz-CM3-HTO181** [Http://www.loawin.com/br/cm3f.fr/climill/plul offsatz-CM3-HTO181**]
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Mammalia; Eurheria: Primates; Catarrhini; Hominidae; Homo.
 indwig institute for Cancer Research
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278 FEGALTEGAGILAAFGCTAFGTGFGGTFGANTALFTFAAAACFGGGGGCGGAFGTF 337
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The FAPESP/LICE Human Cancer Genome Project
 Laboratory of Cancer Genetics
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 624 r.LeuPheGluHisThrLeuGlnAsnGluTyrGluLeuMerArgAspArgHTsLeuAspGl
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. em\_gss\_tod:\*

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#### SUMMARIES

| Description                      | HM450031 AGENCOURT | BM561083 AGENCOURT | BQ439221 AGENCOURT | BM545881 AGENCOURT | BC220275 ACENCOURT | AL597811 DKFZp3130 |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1                                | 1923 13 HM450031   | BM561083           | BQ439221           | BM545881           | HQ220275           | A1.597811          |
| Ŧ                                | ~                  | <b>*</b>           | 7                  | <u>,</u>           |                    | _                  |
| *<br>Query<br>Match Length DB 1D | 1023               | 1051               | 1081               | 77 -               | 30<br>30           | 3 171              |
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| Score                            | 5.016              | 9071.4             | #1.6               | 752.4              | 240.8              | 725.4              |
| Reesty 1.1<br>No. 3              | -                  | ~;                 | -                  | 4                  | ı°.                | 4                  |

| - 00           | 0.003       | 4.00  | 10.00   | 1 :  | 0.000.000.000                            | 0.40 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - 0.000 - |
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| 0 0            | 4.00        | ) u   |         | 1 -  | 50.000                                   | 5.5.5.5.4.5.6. 6.0.2.5.9.1.5.1.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                | 691.3       | 0.02  | 7/6     | ÷ 3  | ISM4 h b 194                             | EMASSISA AGENCINA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7 -            | 2 . t . c . | 0.0   | 14 to 0 |      | ALOP 3 / 0 / DM4 6 3 7 3 4               | Albert Albert 157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7              | 9000        | 100   | 673     | · ~  | 12 C C T T T T T T T T T T T T T T T T T | MIRCHARD PORTS MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERAL MADERA MADERA MADERA MADERAL MADERAL MADERAL MADERAL MADERAL MA |
| Ĩ              | 646         | 19.1  | 1.464   | Ξ    | AK011246                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <del>-:-</del> | 643.6       | 1.9.1 | 21.2    | 0.   | BUT 89.278                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 15             | 642.2       | 19.0  | 681     | -1   | BG615,219                                | EG616219 602644717                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 16             | 617         | 18.3  | 618     | ÷    | BM264009                                 | 1M264009 iq 44108.x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 17             | 614         | 18.2  | 694     | 0    | BEOB2846                                 | BE082846 RC2 BT064                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 90             | 605.2       | 17.9  | 6.2.3   | 0    | AW583181                                 | AWSHIBL LALLBUS. Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2              | 605         | 17.9  | 909     | v    | A1.5996 44                               | AL599633 DKFZp314F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 02             | 596.4       | 17.7  | C 25    | <br> | HG253543                                 | HG25 4543 602364278                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 21             | 580         | 17.2  | 6,80    | 6    | AL599105                                 | ALS 99105 DKFZp 41 46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <u></u>        | 575.2       | 17.0  | 914     | Ġ    | AA76 1411                                | AA263411 VW54404.F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 53             | 566.4       | 16.8  | 588     | 10   | AW368244                                 | AW468244 CM3 HT018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 24             | 558         | 16.5  | 871     | 2    | AA763485                                 | AA763485 vw54h01.r                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 25             | 530.2       | 15.7  | 865     | 0.1  | AW582967                                 | AWS82967 LAUBOURLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 26             | 530         | 15.7  | 539     | 5    | A1.692790                                | AL692790 DKFZp3131                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Ċ.             | 800         | 15.6  | 17.5    | ر.   | AL120941                                 | ALL 2034   DKITEP762D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 28             | 516.8       | 15.3  | 297     | 2    | BE941246                                 | BE941246 MR0 HT015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5.7            | 514.2       | 15.2  | 594     | ្ឋ   | AV7155+3                                 | AV715544 AV715544                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>3</b> €     | 512.2       | 15.2  | 7.34    | C4   | BF144857                                 | HF144857 601790343                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7              | 9.808       | 15.1  | 1154    | 14   | BM802746                                 | HMB02736 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4.2            | 505.2       | 15.0  | 736     | ~    | 141151568                                | H1151568 602916108                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| £              | 4.53.8      | 14.6  | 575     | æ,   | AABSBESS                                 | AA258255 2159404.r                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 34             | 486.4       | 14.4  | 584     | 15   | BG149050                                 | Bi3145050 nu88col.y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3.5            | 484.4       | 14.3  | 493     | 10   | AW502887                                 | AW502887 UI HF BNO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 36             | 484.2       | 14.3  | 1001    | ~    | HM475603                                 | BM475603 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 37             | 481.4       | 14.3  | 484     | 10   | BE168095                                 | BET68095 0V3-HT051                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 38             | 480.2       | 14.2  | 659     | ~    | B1821116                                 | B1821116 603035591                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 34             | 476.6       | 14.1  | 2083    | 13   | BM456728                                 | BM456728 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>7</b>       | 474.4       | 14.0  | 7 34    | ~    | B1526982                                 | R1526982 602927177                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4              | 465.6       | 13.8  | 880     | 74   | BQ222227                                 | BC22227 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4.2            | 459.2       | 13.6  | 4.97    | 1    | BE934784                                 | BE944784 RC3-HT094                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4.3            | 457         | 13.5  | 457     | 5    | A1094215                                 | A1094215 qb04a02.x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4              | 457         | 13.5  | 732     | σ'n  | AL598766                                 | AL598766 DKFZp314F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Ľ              |             |       |         |      |                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### ALTGNMENTS

| BM450031 1024 bp mRNA linear EST 05-FEB 2002<br>AGENCOURT_6394544 NIH_MGC_72 Homo sapiens cona clone IMAGE:5528047<br>5% mRNA sequence.<br>BMM50031 Associated | bes vostil Gille, 2007.<br>Numan.<br>Homo sapiens<br>Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Eureleostomi;<br>Amammalia; Eutheria; Primates; Catarthin; Hominidae; Homo. | I (bases 1 to 1023) MIH MG: http://mgc.nci.nih.gov/. Mational Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1949) Context: Robert Strausborg, Ph.D. Email: cgapbs:r@mail.nih.gov Lissue Procurement. AICC/CID/DIP CUNA Library Preparation: Life Technologies, Inc. CNA Library Preparation: Life Technologies of the Consortium (LINL) UNA Sequencing by: Agencourt Hioselence Corporation Clone distribution: MGC clone distribution information can be found through the LAMISCS (Consortium/LIAN. at: MITE://image.llui.gov Plate: LLAMISCS (Gov. 3 column. 22 | nigh quality sequence stop: 045.<br>Totallof/Qualifiers<br>11024 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| RESULT 1 BM450031 LOCUS DEFINITION ACCESSION                                                                                                                   | Σ<br>Σς                                                                                                                                                                              | REFERENCE<br>AUTHORS<br>TITLE<br>JOURNAL<br>COMMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ** FEATURES<br>SOUTE                                             |

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Another Organ skin Vertor pCMV.SpokT6, Sibe; Not1.
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 2 kt. .: Orary constructed by ::fo
 1965 CAAAGIGAAGAAIATAGAPCIITAAAIICAAAATCAIGIAACAGGAIACAAGGAICIITCC 2024
 2025 INATIGNETH PAGGAGAPAPERGAAAGTGEPPTGAAGAAGAAGAGGAGTAFGAFTAT 2084
 2085 INTRGINITETATANCICGGGTCITGATGCAGARACAAAAATATTTGCAGTATGC 2144
 2145 TECCACCAGRACITETACTTGFCAATACTATCACTCAATCCTCAAAGCCCTTACAAGTT 2204
 7705 TOTTABLICADORINACGAMINATISAGGGAAGATGTATATTIGAGGGTGAAGAGTGG 2264
 2355 ATAIAAAAIIICAGAAGGICIGCCAACAACAAAAAAIGACICCAAGAICAAGAAIGII 2324
 2385 ALGIAACAGGGACGTGTGCTCAAAAGAAGTGCTGAAGGAAGCAACCCTCCTAAACCACT 2444
 2445 GAAAAAACTAGGCTTTGATATTGAAGGATCAAAGAAGAAATAAAAGTAAAAGATGTCCC 2504
 2505 AGGAGAGICCAAAIIICAGTAGAAACIGGCAGAAAIGATITTACITGAAATAAGAATAGA 2564
 2565 AAAGCAJAAAATGAATGATGGATGGATAGGTCAAAAGAAGGAAGAGAATGAGGAFGY 2624
 2625 OSACCTIOSTOSACACTATOTACACTOTAGATECATETATOTACACACACACACACACACA 2684
 2685 TAACTITCCCASCITCTCTTTATGCCAATITAAIATACITCACCICITTTGCAAAAA 2744
 2745 AAAATGTGGAGATGGAATTTGTTTT --GGGTGATTTGTTAAGGGGAGTTGTTAGTGATTT 2802
 61 TCATGCTGTTCASSASATATTCAAASTSTTTTSATCAAAGAAGAGGASTATGATTCTAF 120
 6; Gaps
 27.0%; Score 910.2; DB 13; Length 1023; 95.2%; Prod. No. 6.7e 168;
 Pred. No. 6,7e 168;
0; Mismatches 43; indels
 /clone_"(MACE.5528637"
/clone_lib="NHH_MGC_72"
/tissue_type "melanotic melanoma"
/lab_host="DH10B (phage-resistant)"
 281 t
 Average insert size 2 kb.
Technologies."
211 c 197 g 281 t
/orqanism-"Homo sapiens"
 /db_xre1-"taxon:9606"
 Matches 972; Conservative
 Similarity
 334 a
 Quera Match
 Best Local
 HASE CHUNI
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1051 EF MRNA linear EST 20-FEB-2002
AGENCOURT_6566133 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905
57, mkNa sequence.
HM561083
 /lab.host="DH10B (plage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: SalI; Cloned unidirectionally. Frimer. Oliao dI.
Average insert size 1.75 kb. Library constructed by Lile
 Euteleostomi;
 2803 (VIRATIONANATIONANAE) HERGIAAATOOTSOOTITAAAAAGIIGITAAAASA 2862
 2863 TTGITH-ORIGHTOCAAAGTAAATTGCTGTGTGTTTATGGATAGTAAGAATGG---CCC1 2918
 1123 AAAGCIGTGSGAGAGSTILTITTTGAAALTGGATGAGAGGAGGTFGGAGTIGGG 1182
 1243 AATTTAGGAAACTTGTSAATSAGAATTTTGAJATGTGTTATTAGGGGTGGGGGGGTGTT 1302
 841 GTTATLIATACCAGALTGAAAATCTTGTGAAALCCLGCCAATTAAAAAGTTGTAGCAGA 900
 cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arcayed Ly. The L.M.A.S. Coulostium (LLNL) DNA Sequencing by Agencourt Biosvience Cotporation Clone distribution: MGC clone distribution information can be found through the L.M.A of F. Consortium/L.N. at:

http://moge.lln.gov column: 18
 61 PPGPAPPACGAGPAATGSAATGCATGCTTAAATGAGAAGAAGAAGGATTATGGATTGAA 120
 1 (bases 1 to 1051)
NIH-MGC http://mgc nci nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 D: Capp
 1 ATASTICTGGGGGGGGGTGTGTGTGTGGAATTGGATGAGGAATAAGAAATTGGGTGG
 Eukaryota, Mctazoa, Chordata, Craniata, Vertebrata, Butelev
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
 Score 909.4, EB 13, Length 1051; Pred. No. 9.6e-168;
 Indelo
 4 others
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 Contact, Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
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98.48;
 221 0
 Unpublished (1999)
 Conservative
 .1051
 Homo sapiens
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 330 a
 human.
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 AUTHORS
 KEYWORDS
 BM561083
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AJENDOJRI 7786562 NIH MGC_92 HOMO SAPIENS CONA CLONE IMAGE:6015480
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 1483 PERTORARA PORA PERCENTINA PARA PORA PORA PORA PORA PERCENTERA PERCENTERA PERCENTERA PERCENTERA PERCENTERA PERCENTERA PERCA PERCENTERA PERC
 1603 CHTAATCT BOTTGTGGGAAALAATGACACTGGAGGAGATATGTATGTTGTGTGTAAGA 1562
 1663 ICTCCAAAGAAAAAGGTTCAACTACGCGTGTAAATTGTACTGCAAATGCAGAGAGAA 1722
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 1303 GAGGLIGTAALGGGGAAMALAGNAGAAGTAMATCHMAAAFMHYBALLMEGAAMAATT 1362
 14.2.3. ATEGRAAGELLEATCAAGGAGGAAGGTGACATGACAAGGAAAGATTTAGAA 1482
 154 ± CFLATIAAAGAAFGAAGGAGGAGGAGGAGGAGGAGTGAAFGTGGATGTGGTTGFGGT 1602
 1724 GTAAGGTGAGGGTTGGAGAGGGAAAGGGAIIGAAATGIAGGTGTGTTGAGTGTTTAT 1782
 HELLEFTHER THE STATE OF THE STA
 481 CITAATCITCCICCAGAAIAATCACACTGCAGCAGATATGTATCITTCTCCCGTAAGA 540
 121 AAITITAGCAAACTICIGAATGACAACATITITIGATATGIGITITATIGGGGTGGGCTCTT 180
 181 GAGGLIGIAATGGCAGATATAGCAGAGTAGATGTGAGAATGTTGTGGAACAGAT 240
 4.21 CLIALLAAACAALGAAAGGACGAGAAGGAACTGATCACCTTGAATGTGCTTGTCCT 480
 651 AAAAAAGTGTATGGGGTAGGGTATGTGGGGGTAAATAGAGTTTGTGAAGGGGTTGTGTGT 720
 2022 FCCFCAFISCHGLICAGGAGALFFCAAAGGLGF-TITGATGAAGAAGAGGG 2073
 RQ4 39221.1 GI:21178297
 5', mRNA sequence.
BQ439221
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Eukaryota, Metazoa: Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia: Eutheria: Primates, Catarrhini, Hominidae, Homo.
 NIH MGN http://mgc.aci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 Contact: Robert Strausberg, Ph.D.
Email: eqapbs:romail.nih.gov
 (bases 1 to 1081)
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//lab.host" DH10B (phage=resistant)"
//lab.host" DH10B (phage=resistant)"
//note="Organ: testis: Vector: proffs; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oligo dT primed.
Average insert.size 2.5 kb. Library enriched for
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Note: this is a NHH,MGC Library."
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 2659 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTA 2718
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 2959 IGCCTICITIFGTAGGATATAGGTGATGTTTGCTGTTTTTTATTATTATTATGTATATA ANTB
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 601 ITTGATTGACTGCCCATTCACCAAAATTATCCTGAAAGTCTTCTGCAAAAATGGATATTAT 660
 421 TGGATAGTAAGAATGGCCCTAGAGTGCGAGTCCTGATAACCCAGGCCTGTCTGACTACTT 480
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 61 ATGACTTCTACTCGAACACGAATGCAAAAGCAGAAAATGAATAATAGATACGTGA 120
 indels 4; Gaps
 1 GAAGCAGATGGAAAGTAAACATCTCCAGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAA 60
 2779 AAGCCACTTGAAATGTTAGTGATTGTTALIIAIACAAGATTGAAAA1CTTGTGAAAATGC
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 Location/Qualifiers
Tissue Procurement: ATOC
 99.18;
 Best Local Similarity 99.19
Matches 892, Conservative
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HUZZ0275.1 GT:20401675
 5', mRNA sequence.
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 // Joste - Orary (pool of 3); Vector: pCMV-SPORT6; Site - Stell: Ecory (destroyed); Site - Site - Stell: Ecory (destroyed); Site - Site - Stell: Ecory (destroyed); Site - Site - Site - Stell: Ecory (destroyed); Site - S
 Unistructed by C Gruber (Invitrogen). Research Genetics tracking ende 036."
 lineal EST 20-FEB-2002
 BMS45881
AGENYOURT 6505183 NIH_MGC_125 Homo sapiens CDNA clone iMACE:5588245
 2404 CICAAAAGAAGIGGIGAAGGAAGCAACCCICCIAAAACCACIGAAAAAAACIACGCITIGAI 2463
 Eukaryota, Matada, Cherdara; Utaniata, Vertebrata; Eufeleostomi;
Mammalia; Eutheria; Primates; Catalifici; Hominidae; Homo.
 b; Gaps
 cona Library Preparation: Life Technologies, Inc. cona Library Preparation: Life Technologies, Inc. consortium (LLNL) cona Library Arrayed by: The T M A.G. E. Consortium (LLNL) inna Sequencing by: Agencent Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the I.M.A.G. E. Consortium/LLNN. at: http://mage.lln/qov a column: 14
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 NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
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95.6%; Pred, No. 5e-137;
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 Email: cgapbs-r@mail.nih.gov
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 Conservative
 mKNA sequence.
 Best Local Similarity
 Matches 827;
 human.
 Guory Match
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HQ220275
AGENCUORT_7572621 NIH_MGY192 HOMO Sapiens CDNA SLone IMAGE 6014522
 Eukaryola, Metadoar Chordata, Craniata, Vvirebreta, Fineleostomi:
Mammalia, Butheria, Primates, Catarrhini, Hominidae, Homo.
 National Institutes of Health, Mammallan Gene Parismins (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.
 3121 TGCAAAAAT-GGATATTATTAGAAATTAGAAAAAAATTACTAATTTTACACATTAGATTT 3179
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 899 TAAITTATAAATGGATAITITITAATTTAACAIGAANGAGGCTAGAAAAIGTGTGCTA 958
 840 ccigrereachachtigeethe-rhighagealthaganangthigerethaghthar 898
 2764 GTTIGGGIGATICCIAAGCCACTIGAAAIGTIAGICALIGITATITATACAAGATIGAAA 2823
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NIH-MGC http://mgc.nci.nih.gov/.
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 1078 TATTTACTATTGAAAAACGGAATA 1102
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 1153 ONALFACAGOGATACAAACTTOBACTTOGCTTGTAFFACTGAGTAAFGGAAFCCAFGCFF 1212
 973 ATCHARGARITAATGALGATTTTAAAFTCAGCAAGTGAGCTTTGAGAAAATCTGATT 1032
 1033 1031 ITARTHAGAACHGGACAGHGAALGGAAAGAAAGHATAGTGAAAGAGTGAAGGAF 1092
 1152
 DNA Sequencing by: Ageneourt Brosslence Corporation
Clone distribution: MSC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
Plate: LLAM13287 row: e column: 04
 165 CGGALAGCAAAAGAACTAGAAAATGATACAAGAATTATTGAAGTTCTCTGTAAAGAACAT 224
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 2.4. TCTCTTGGACTTGTAACATCTAATGGACTTCCAGGGTTGAAAATCTTTCTAAAGGATAC 792
 793 GAAGAAFITTALCI BAAAA AAAGATCI AGA GGAAGAITA ITTI I GGA I CATAAA - 852
 853 ACTOLLOAGAGIGA FICTATAGACAGTOTIGAAACAGAGAAGAGGGAAAAAGTAAG 912
 465 PTTGATGAAGAGGTGAATGTAATTGGTGGACAGAGTTAGGAGTGTAGAAGACT 524
 645 ATAGGATACATCITTAAACACAAATTTGGTAAAGCTGTGGGACAGGGTTGTGCAAATT 704
 205 GGATCACAGGATACAAACTTGAATTGGCTIGTACTAACGAAATCATGT 764
 55 € GCTGTTATAGGCATAATGGTTGAACACGCAGGCGAGGTCAGAACAGGGGA €12
 613 POGATAGCAAACAACTAGAAATGATAGAAATTATTGAAGTTCTGTGTGAAGAAGAT 672
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 Location/Qualifiers
Email: eqapbs:remail.nih.gov
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 Best Local Similarity
 Matches 767;
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AL597811 727 bp mRNA linear EST 14 AU3 2001
DKPEp31300816_r1 313 (synonym: hlee2) Homo sapieus cDNA clone
DKFp31300816 5', mKNA sequence.
 Poustka,A., Wellenreuther,R., Mewes,H.W., Weil.B. and Wiemann,S.).
EST (Poustka,A., Wellenreuther,R., Mewes,H.W., Weil,B. and Wiemann
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Eukaryota; Metazoa; Chordata; Craniata; Vertebiata; Euteleosfomi;
 Heidelberg/Sermany) within the cUNA sequencing consortium of the
 /note-"Vector: p(riplEx2; Site_1; SfitA; Site_2; SfilB; cDNA-collection"
 Please contact the RZPD: Ressourcenzentrum, Heubmerweq 6, 14059
Berlin-Charlottenburg, GERMANY: Email: clone:rzpd.de.
Location/Qualifiers
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Research Center (DKFZ); Email s.wiemann-dKtz- heidelberg.de;
sequenced by DKFZ (German Cancer Research Center.
 1755 GAAATCTACCTCTCTTCACTGTTTATAAAAAAGIGIAIGGGCIAGCCIAFCFCGGCT 1814
1213 AAATCAGAAGAAGAATTATCCATTCAAAATT1TAGCAAACTTCTGAATGACAACA T 1271
 1815 AAATAGACTTTGTGACGCCTTCTGTCTGGGCACGAGAATAGAACATATCATCTGGAG 1874
 121 CCTTTTCFAGCACACCCTGCAGAATGAGTATGAACTCATGAGAGACAGCATTTGGACCA 180
 61 AAATACACTTTGTGAAGGGGTTGTGTGTGTGAGCACCGAAAATAGAAACALALCAFCTGGAC 120
 No sl sequence available.
This clone (DKEzp31300816) is available at the KZFD in Berlin.
 Salis
 1272 ITTICATATGT-CITTATTGGGGTGGGCTCTTGAGGTTGTAATGGCCACATATAGC 1326
 1 GAAATCTACCFCFCFTFCACFCFFFFAFAAAAAGTGTATGGGCFAGCCTATGGGGT
 Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 727)
 Indets C.
 198 9: Length 727;
 Max-Planck-Institute for Molecular Genetics
Innestrasse 74, 14195 Berliu, Germany
Tel: 449-30-84141624
Fax: 449-30-8441128
Email: poustka-mpimg-berlin dahlem.mpd.de
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99.9%; Pred. No. 9.8e-132;
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Department Lehrach
 German Genome Project
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 Best Local Similarity 99.9
Matches 726, Conservative
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 Query Match
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 ORGANISM
 BASE COUNT
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 REFERENCE
 AUTHORS
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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 BG510661 BST 18-APR-20
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 2245 GAAGATOTATATTTGAGGGTGTGAGGGTGGATAAAATTTGAGAAGGLGTGGGAAGAG
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Plate: [[cM]605 row: o column: 1]
 Contact: Robert Strausberg, Ph.D.
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 /db_xre1-"taxon:9606"
 Email: cgapbs-ramail.nih.gov
Tissue Procurement: DCTD/DTP
 Location/Oualifiers
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 Unpublished (1999)
 mRNA sequence.
RG610661
 Homo sapiens
 2475 AGATGAN 2481
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 contained inserts by Pre This library was enriched for full-length clones and was constructed by Clontech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC
 2505 AGGAGAGTOOAAATTTGAGOAGAAACTGOOAGAATTAATTGOTAATGGGAAGAGGAGAAGAA
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Pred, No. 1.1e-126;
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Local Similarity 94.88;
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SiII (durcurer equec); Site_2: SiII (qquestidaqqee); 5' and
sequence. 5' CANGGENTIARGEG 4' and 4' adaptor sequence.
5' ALICIARANGEGENTARGEG 4' and 4' adaptor sequence.
5' ALICIARANGEGENTARGEG 4' and 4' adaptor sequence.
5' ALICIARANGEGENTARGEG 4' and 8' adaptor sequence.
6' OF GINNER BY CONTROLLER SIZE IL9
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KE (1911 0.5 4 0.0 KE) 12/3; FOLLARIS CANTANGER SIZE IL9
KE (1911 0.5 4 0.0 KE) 12/3; FOLLARIS CANTANGER SIZE IL9
CA). Note: this library was enriched for full-length clones
and was constructed by Cloutech Laboratories (Palo Alto,
CA). Note: this is a NIII_MGC Library."
 EST 10-APR-2001
 Eukaryofa; Metazoa; Phordata; Craniata; Vertebrata; Euteleostomī;
 167-0456
602591312ELNHE,MS7_77-HOMO-SAPICHS CONA CLONE IMAGE:4717874-57,
 2585 000 GGALACOLCAAACAAAGAAGAAGAAGAGAGACALGCCAGGACCLCGAGGACACGCCCCC 2644
 2645 TACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTATAACTTTCCCCAGGTTCTGTT 2704
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 DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be cound through the L.M.A.G.E. Consortium/LLML at:
 1 (bases 1 to 767)
NIH MGC http://mgc.nci.uih.qov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 4; Gaps
 1 (B) A TOGATA STECAAA SAAGAAGAAA TOAAA TOAGAA TEAAGAACETTGGGACA TGGG (B)
 cDNA Library Preparation: CLONIECH Laboratories, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLML)
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 20.5%; Score 692.2; DB 12; Length 767; 97.1%; Pred. No. 3.1e-125; tive 0; Mismatches 18; Indels 4;
 /clone lib "NIH_MGC_77"
/lab_host="DH10H (T1 phage resistant)"
 Email: eqapbs remail.nih.gov
Lissue Procurement: CLONTECH Laboratories, Inc.
3282 TACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACT 3323
 777 HELL HILL FORMALICATARIGINALITE BLE FORMANISTRABAGAAGGE BLE
 Plate: LICM1568 row: h column: 03
Righ quality sequence stop: 725.
Location/Qualitiers
1. 787
 Contact: Robert Strausberg, Ph.D.
 /orqanism-"Homo sapiens"
 /clone-"IMAGE:4717874"
 /db_xre1-"taxon:9506"
 BG570456.1 GT:14578109
 http://image.llnl.gov
 Unpublished (1999)
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BM466194 972 bp mRNA linear ESI 05-FEB 2002
AGENCOURL_6456973 NIH_MGC_92 Home sapiens con clone IMAGE:5576939
 Homo sapiens
Bukaryota; Metazoa; Chordata; Graniata; Vertebrata; Enteleostomi;
Mammalla; Euthecia; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 972)
 /note-"Organ: testis; Vector: pCMV SPORIG; Site_1: Not1;
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 3065 TCTTCCAAATGCAATTIGALIGACT GCCCALICACCAAALLALCCLGAACTCLICLGC 3123
 3124 AAAAATGGATATTAGAAATTAGAAAAAAAHTACTAATEFFACACAHAGAEHTAHT 3183
 184 TTACTATTGGAATCTGATATACTGTGTGTGTTTTATAAAATTTTG\TTTTAATTAAATT 3244
 3244 AAAAGCTGGAAGCAAAGTATAACCATACTATTGATACTACTACTGAAACATTTCATA 3404
2825 ICTIGIGIAAAICCIGCCAIITAAAAAGIIGCAGCAGAITGIIIGCOOTTAAAAGIAAA 2884
 2885 ALTGCTGTGCTTTATGGATAGTAAGAATGGCCCTAGACTGGGACTTVTGALAANVYYAGGC 2944
 DNA Sequencing by: Ageneourt Broscience Corporation
Cloue distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL al:
PLOE//Image.llh.apov pow. j column: 12
 481 TCTTCCAAATGCAATTGGATTGACTGGCCCATTCACCAAAATTATGCTGAACTCTTGTGC 540
 541 AAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTAGAGALFAGATTTTATT 600
 NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC)
 CONA Library Arrayed by: The LLM.A.G.E. Consortium (LLNL)
 /clone_lib="NiH_MGC_92"
/tissue_type="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
 Unpublished (1999)
Contact: Kobert Strausberg, Ph.D.
Contact: Robert Strausberg, Ph.D.
Email: cqapbs-rimail.nih.qov
Tissue Picotrament: ATCC
CDNA Library Preparation: Life Technologies, Inc.
 /organism-"Homo sapiens"
 High quality sequence stop: 621.
 /clone="IMAGE:5576939"
 /db_xrei-"taxon:9606"
 Location/Qualifiers
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Site_2: Sall; Cloned unidirectionally; oliqo-dr primed. Average insert fige 2 "kh. Library enrighed for full-length clones and constructed by Life Technologies. this is a NIH_MGC Library." 2 others
 2001 TSTITATGGCACATTAATATCTTCAGCTCTTTTGGGATATAAAARGGTGCAGAA 2769
 2521 GAGGAGAAAGTGGCAGAAATGACTTCTACTGGAAGGGGAATGCAAAAGGAAAAATGAAT 2589
 2761 ALIGILIGOSTOALTOPPAAROOAGTIGAAAPGFTARPPARTATATATAGAAGAPPG 2820
 2821 AAAAICIIGIGIAAAAICCIGCCAIIIAAAAAGTIGIAGCAGAITGIITGCIGTIGGAAAA 2880
 2940
 *08] TOTATOTE CANARISCANTESALESACISSISSINTICASSANAITARCORGAGICTIC 3128
 1121 ISCAAAAATGGATATTATTAGAAATTAGAAAAAATTACTAATTTTTACACATTAGATTTT 3180
 181 AITITACIATEGAATCIGALALACIGIG-----TGCTTGTTTATAAAATTTTGCTTTT 3235
 241 AITGITIGGGIGATTOOTANGOOAOTTGAAATGITAGTOATTGATTATATAAAAATG 300
 481 TATTAATTIALATGIATATTTTTTAATTTTAACATGAACACCCTTAGAAAATGTGTCCTA 540
 181 TGITIATGGGCACATITAATATGTICAGGTGTTTTTTGTGGATATAAAATGTGCAGATGGA 240
 601 TGCAAAAATGGATATTATTANAAATTAGAAAAAATTACTAATTTTACACATTAGATTTT 660
 C, Gaps
 1 CATCACAAACTGGGAAAAAATGACTTCTACTGGAACACGAAATGGAAAAAGAAAAATGAAT 60
 20.5%; Score 691.8; DB 13; Length 972; 96.7%; Pred. No. 3.6e-125;
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 Pred. No. 3.6e-125;
 1236 AATTAAATAAAAGCT-GGAAGCAAAGTATAACC 3267
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 /note="Organ: brain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a Not1 01190(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not 1 and
 Eukaryola, Mericon, Chordala, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhisi, Hominidae, Homo.
 973 ATCCAACAAFFAATGATGATTTTAAATTCAGCAAGTGATCAACCTTCAGAAAAATCTGATT 1032
 SES WIPCAN'AALBAA'SABIIIIAAAIICAGCAAGIGIICAACCIICAACAAAATYKGTII 806
 FER GETGITALMENEVATIANIGHTERMETERSARAMENDAGGGGAGGGIAMAMAKAGAGGA 612
 613 CGGATAGCAAAACAACTAGAAAATGATACAAGAATIATTGAAGTTCTCTGTGTAAAGAACAI 672
 725 CGGWTAGCAACAAYTAGAAATTGATACAAGAATTATTGAAGTTCTCTGTAAAGAACAT 666
 7/8 TOTOTTGGAOTTGIAACATCTAATGGAOTTGGAGGTISAAAATGTTTGTAAACGATKO 792
 KOS TOTETETETATETEMAZATOTWATGGAZITEZAGGGTEGAAATTETETETAAACGATAC 546
 793 GAAGAAATITAICITAAAAATAAAGAICIAGATGGAAGAITAITITIGGAIGAIGATAAA 852
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 305 TCYTWITITIACGACTGACAGTGAATCCAAAAGAAAAGTATACTGAAAAGAGGGTT 246
 3, daps
 673 GAATGTAATATAGATGAGGTGAAAAATGTTTATTICAAAAATTTTATAGGTTILFALGAA
 Email: segref@genuscupe.cns.fr, Web : www.genoscope.cns.fr
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Li,W H., Gruber,C., Jessec,J. and Polayes,D.
Fell-length cDWA libraries and normalization
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Site_2: Sall; Cloned unidirectionally, Primer: Oligo dT.
 AGENCOURT, 640274 * NIH_MGC_72 Homo sapiens conA clone IMAGE:5528814
 Eukaryota: Metažoa; Chordata; Craniata; Verrebrata; Eutelgostomi;
 Library constructed by Lile
1093 ATAGGAFACATCTTTAAAGAAATTTGCTAAAGCTGTGGGGACAGGGTTGTGTGGAAATT 1152
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 1211 THAAATGAGAAGAAGAAGATTATCCATTCAAAATTTTAGCAAACTTGTGAATGACAA-C 1269
 1482 ACGATGTSAACATCGAALCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGA 1541
 1602 TOTIAATOTTOOTOTOPORAATAATOACAGAGAGATATGTATOTTOTOOTOTAAG 1661
 cDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Aquencour Educate Corporation Clone distribution; MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
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 13 AGGATGTGAACATGGAATCATGGAATCCCITGGATGGCGTGCAGATGTATTTGA 72
 Mammalia; Entheria; Primates; Catarrhini; Hominidae; Homo.
 20.1%; Score 678; DB 13; Length 835; 100.0%; Pred. No. 1.8e-122;
 1 others
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 1270 ATTITICATATGICITIATIGGCGTCCGCTCTTGAGGTTGTAT 1313
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 Average insert size 2 kb.
 Contact: Robert Strausberg, Ph.D. Email: eqapbs remail nib gov
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrafa; Euteleostomi;
 603392330P1 NIH_MGC_90 Home Sapiens cONA clone PMADE:5402622 5:,
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 2882 TATTATAGIAITGIAIAAGTSSGTGITGATGSAGAGTSAAAAAAAAAIAISIS AGTA 2141
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 DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the L.M.A.G.E. Consortium/LLNL at:
133 TOTITAMICITORICAGAMIAMICACA GGTAS AGAIMIGIAN HILLICIGIDAG 192
 193 ATCTCCAAAGAAAAAGGTTCAACTACCCTCTAAATTCTACTCCAAATGTAGAAAAA 252
 1 (bases 1 to 672)
NHH-MGC http://mqc.nci.nih.gov/.
National Institutes of Health, Manumulian Gene Collection (MGT)
 2022 TCCTCATGCTCTTCAGGAGAGACATTCAAAAGHGH HIGALGAAAGAAGAGGGLALGATTC
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 http://image.llnl.gov
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 Confact: Robert Strausberg, Ph.D.
Email: cqapbs-r@mail.nih.gov
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/note="Organ: liver; Vector: pGMV SPORT6, Site_1, Noti,
Site_2: Sall; Cloned unidirer ionally; whigh off primed.
Average lasert size 1.7 kb. Library enriched for
tull-length clones and constructed by Lite Technologies.
Note: this is a NHHMMC library "
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Mus musculus 10 days embiyo whole body cDNA, Rikku füll length
enriched library, clone-26,00017M22-retirgklastyma 1, full insert
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 2343 IGACICCAAGAICAAGAATTIFAATAAATTIGGIGAATTGAIGATTOGGGATIGIGAGAAGI 2362
 2423 STAARITAARITITETTAAAROARITITAAAAARITARITITITITITITITAAAAAAG 2492
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 842 CATELAAAAAGEEGEAGAGEEGAATTGEETGGEGGAAAGEAAAATTGGEGGGETATGG 2901
 41 IGACICHAAGAIFAAGAAFFITAGIAIFAATIFGIGAATGAFTFOGGAAFTFFIGIAGAAGT 120
 101 CLICTACICGAACACGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTCAAACA 360
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 941 CACITGAAATGTTAGTTGTTATITATANAAGA17GAANAAATCTIGTGIAAADNN1GG 600
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 Mys myscylys (strain-057R)/6J) 10 days embrye cond to mRNA.
 clone_lib:RIKEN full-length enriched mouse conA library
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99.9%; Pred. No. 6.1e-119;
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Alzawa, T., Shinadawa, A., Shibata, K., Yoshino, M., Itoh, M., Ishii, Y., Arakawa, T., Bara, A., Fukunishi, Y., Kunno, H., Adachi, J., Fukuda, S., Arawa, K., Izawa, M., Ishi, K., Yosawa, H., Kondo, S., Yamanaka, I., Saito, K., Izawa, M., Ishi, K., Kiyosawa, H., Kabutawa, T., Saito, R., Kadota, K., Matsuda, H., Ashenrher, M., Batalev, S., Casavant, I., Fleischnin, M., Casaiceland, I., Gissico, K., King, B., Nochiwa, H., Kuehle, L., Lewis, S., Marsuo, Y., Nikaido, I., Pesole, G., Nochiwa, H., Kuehle, L., Washio, T., Sakai, K., Okido, I., Puchor, Anno, B., Haldarelli, R., Harshio, T., Sakai, K., Okido, I., Puchor, M., Hume, D.A., Kamiya, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, K., Hill, D., Holman, M., Hume, D.A., Kamiya, M., Lee, N.H., Lyons, F., Murchional, L., Mashima, J., Mazzarelli, J., Monbaetts, F., Kudya, K.H., Weltz, S., Schobach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Toyo-oka, K., Wang, K.H., Weltz, C., Whittaker, C., Wilming, I., Wynshaw Horis, A., Yoshida, K., Hasegawa, Y., Kawaji, H., Kohtsuki, S., Pindtional annotation of a full-length mouse cDNA collection
 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, V., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and Subtraction of cap-trapper-selected chipas to prepare full-length cDNA libraries for rapid discovery of new genes Sengme Res. 10 (10), 1517-1630 (2000)
 Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Aono, B., Arai, A., Arakawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C., Carninci, P., Fukuda, S., Fukunishi, Y., Fukuno, M., Hanadaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hirawa, M., Kasukaki, T., Hume, D., Imotani, R., Ishii, Y., Itoh, M., Izawa, M., Kasukawa, I., Kato, H., Kawai, T., Kejima, Y., Kono, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Shita, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Quackeubush, J., Shito, B., Salio, F., Sakai, C., Saki, K., Shipaki, I., Shibata, K., Shipaki, I., Shibata, K., Shipaki, I.,
 Stibbta, K., 1994, M., Aizawa, K., Natharka, S., Sazaki, N., Cathinolif., Ronno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishiro, T., Rakamura, S., Harama, M., Mishine, T., Harada, A., Yamamoto, P., Matsunoto, H., Sakaquehi, S., Ikeqami, T., Kashiwani, K., Fujiwake, S., Inoue, K., Toqawa, Y., Irawa, M., Ohara, E., Watahiki, M., Okazaki, Y., Muramatsu, M., Hooke, Y., Ishikawa, T., Ozawa, K., Hanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Hooke, Y., Kida, A. and Hayashizaki, Y. FIKEN integrated sequence analysis (RISA) system 384-tormat sequencer. 1757-1771 (2000)
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Mammalia: Eutheria, Rodentia, Sciuroquathi, Muridae: Murinae: Mus.
 Submitted (10.101 2009) Yoskihide Huyashizaki, The Institute of Physical and Chemical Research (KikEN), Laboratory for Genome
 .. Sunuki,H., Tagami,M., Tagawa,A., Takahashi,F., Tejima,Y., Toya,T., Yamamura,T., Yamanaka,I.,
 Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and
 High efficiency full-length cDNA cloning
Meth. Enzymol. 303, 19-44 (1999)
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 cDNA library was prepared and sequenced in Mouse Genome
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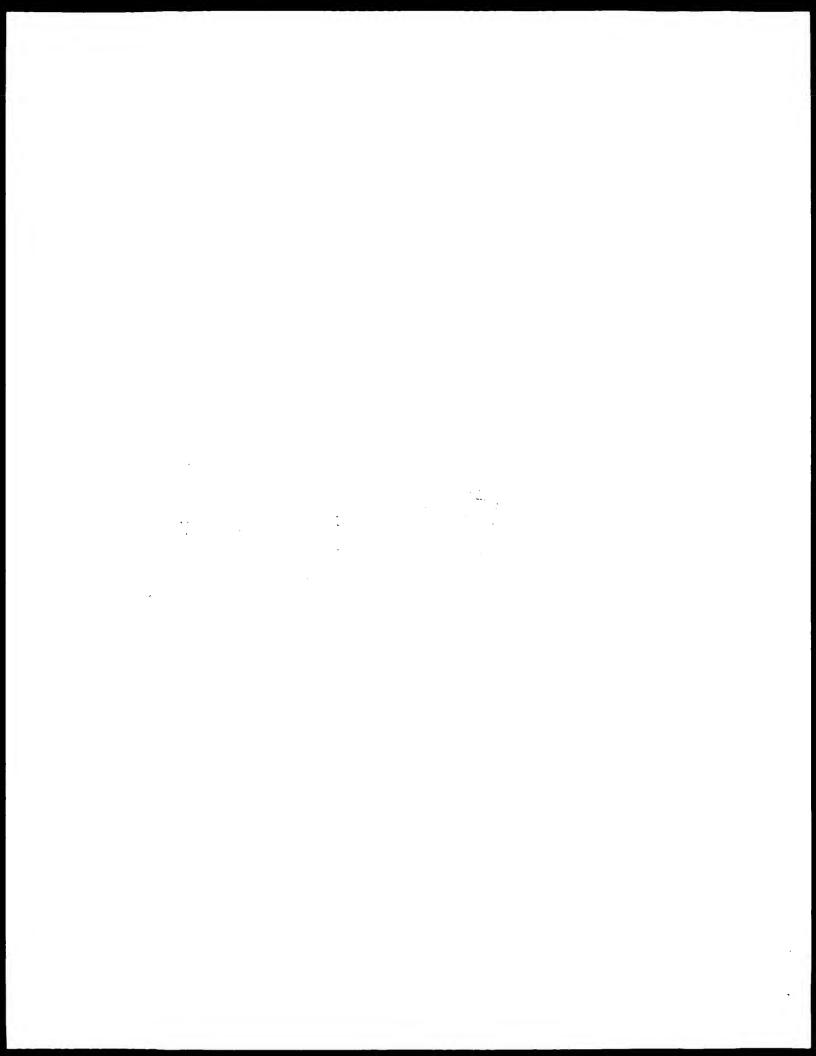
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### SUMMARIES

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## ALLEINMENTS

|                      | BM450031 1024 bp mKNA linear EST 05-FFB 2062 | o sapiens cona clone | HM450031  | BM450031.1 GI:18499071 | EST.     | human. | Homo sapiens | Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Enteleosfom: | Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. | l (bases 1 to 1023) | NIH-MGC http://mass.nci.nih.aov/. | National Institutes of Health, Mammalian Gene Collection (MGC) | Unpublished (1999) | Contact: Robert Strausberg, Ph.D. | Email: cgapbs-r*mail.nih.gov | Tissue Procurement: ATCC/DCTD/DTP | cDNA Library Preparation: Lite Technologies, Inc. | CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) | DNA Sequencing by: Agencourt Bioscience Corporation | Clone distribution: MGC clone distribution information can be | found through the I.M.A.G.E. Consentium/IJ.NL at: | http://image.llml.gov | Plate: LLAM12204 row. d cellumn: 22 | urgh quality sequence stop: 644.        | noviet nov gualificis<br>1. 1023 |
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| RESULT 1<br>BM450031 | LOCUS                                        | DEFINITION           | ACCESSION | VERSION                | KEYWORDS | SOURCE | ORGANISM     |                                                                  |                                                            | REFERENCE           | AUTHORS                           | TITLE                                                          | JOURNAL.           | COMMENT                           |                              |                                   |                                                   |                                                           |                                                     |                                                               |                                                   |                       |                                     | 0.0000000000000000000000000000000000000 | FLAIGNIS                         |
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| 그 씨는 장마는 어느와 씨는씨 장마장 장마를 가는 것 같아요. 장마의 시구의 어느를 보고로 먹으면                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ALLI LAGCAAACT FOTGAATGACAAGATTTTCATATGT | ABSTEGIAATSSP WATALASPASAASIACALCEGAA<br> | POPULITION AND ALICHOANIO OCTIANTI NAAAOO<br>FELLITITI HILITII HILITII HILITII HILITII II<br>REPUTII COATOOATIC DAALOTOOTAATTAAAAO | CPGAARITTTATCAAAGCABAAGGAACTTGACAAGAG<br>1 - FELFELLELLELLELLELLELLELLELLELLELLELLELL | SATGEGACALCGANTCATGGGATCCCTTGCATGGCTCTCTCTCTCTCTCTCTCT                  | TELA ITAAACAATCAAAGGACIGAGAAGGACCAACIGATCA<br> | TTAATOTTOTOTOTOTOAGATAATOAOACTGOAGGAGATA)<br>                        | PTCCAAAGAAAAAGTTCAACTAGGGTGTAATTCTA<br> | PPARCH CADOTHORNARY PADAGONAL I GAAALCI ACHTILLI III III III III III III III III II | NAAAAGEGTATOGGETAGOCTATCTCCGGGETAAATACKU<br>                        | ANGACOCAMATTANAACATATCATGTGGAGCCTTTTGC<br> | ATGACTICA GAGAGACAGOCATTI GGACGAA ITATGA<br>ELLITITITI HITTITITI TELLET<br>ATGACT CATGAGAGAGAGANITI GAGGAAATATGA | OCAAAGTGAAGAATATAGACTTAA-ATTCAAATGATTU<br>CHILLIHII HIIIHHHHHH IIHHHHHHHH<br>GCAAAGIGAAAGATATAGAAGTTGAAAATGAAAATGCTG | PPOTCATO TGT FCAGGAO VITCAAAOGIGT -TITGAFC<br> |      |
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REFERENCE AUTHORY

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S. Adachi, J., Alzawa, K., Akahira, S., Akimura, L., Aduo, H., Arai, A.,
Anzawa, T., Baldarelli, R., Bono, H., Brownstein, M., Bult, C.,
Carrinci, P., Fikoda, S., Fukonishi, Y., Furure, M., Harasa, T., Hori, F.,
Hara, A., Hayalsu, N., Hill, D., Hiramoto, K., Hiraka, L., Hori, F.,
Hume, D., Hortani, K., Ishii, Y., Itoh, M., Isawa, M., Kisukawa, I.,
Kato, H., Kawai, J., Kojima, Y., Nonno, H., Nowic, S., Oquekenbush, J.,
Kutihara, C., Matsuyama, L., Myazaki, A., Nishi, K., Nonno, H., Sairo, R.,
Kutihara, C., Matsuyama, L., Myazaki, A., Nishi, K., Nonno, C., Qquekenbush, J.,
Sairo, H., Sairo, P., Sakai, C., Shihata, Y., Shihata, Y., Shihata, Y., Shihata, Y., Shihata, Y., Shihata, X., Shihata, Y., Shakalashi, F.,
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Yasunishi, A., Yoshida, K., Yoshiho, M., Mutamatsu, M., and
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 Ltoh,M., Konno,H., okazaki,Y., Muramatsu,M. and Hayashizaki,Y.
Normalization and subtraction of cap trapper selected cDMAs to
prepare full-length cDMA libraries for rapid discovery of new genes
Genome Res. 10 (10), 1617-1640 (2000)
 Marchionni, L., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Ring, B., Ringwald, M., Rodriquez, L., Sakamoto, N., Sasaki, H., Sato, K., Schoibach, C., Seya, T., Shihata, Y., Storch, K.F., Suzuki, H., Toyo-oka, K., Mang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wyushaw Myrishaw Hotis, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S., and Hayashizaki, Y.
 Shibata,K., Itoh,M., Aizawa,K., Nadarka,S., Sasiki,N., Carninci,P., Konno,H., Akiyama,J., Nishi,K., Kitsunai,I., Tashito,H., Itoh,M., Sumi,N., Ishii,Y., Nakamuras,S., Hacama,M., Nishiner,T., Harada,A., Yamamanio,R., Banisandi,R., Ewijawake,S., Insue,K., Toqawa,Y., Lawa,M., Ohara,E., Watahiki,M., Proteda,Y., Ishkawa,T., Odawa,Y., Tanaka,T., Matsunia,S., Kawai,J., Okazaki,Y., Hahakaya,M., Tanaka,T., Matsunia,S., Kawai,J., Sharki,Y., Ishkawa,T., Odawa,K., Tanaka,T., Matsunia,S., Kawai,J., Rikki integrated sequence analysis (RISA) system: Mat-rormat Genome Res. 10 (11), 1757-1771 (2000)
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 Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-690 (2001)
 Carninci, P., Shibata, Y., Bayatsu, N., Suqahara, Y., Shibata, K.,
 URL:http://genome.gsc.riken.go.jp/, Tel:81 45 504 9222,
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Mammalia; Eutheria, Primates, Catarrhini, Hominidae, Homo.
 958 GITCICIGIAAAAAACACAGGIGIAAIAIAGAIGAAGGIGAAAAAIGIIIAIIICAAAAAI 1817
 1198 ACCONTANDADA NA CONTRANDA NO CONTRANDA CONTRACTO NA CARACTORIA 1257
 1258 AGGACTGTTATCAATACTATTCAACAATTAATGCTGATFTTAAATTCTGCAAGTGATGAC 3317
 1018 TITATERRITATAAATIOANTEGGAATTGTATEATEAATGGARTTEGAAGGTIGAA 1077
 cDNA Library Preparation. Lite Technologies, inc. cNA library Arrayed by: The I M A.E. E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
 FIRE TOTAL NATIONAL TO A STATAL MAKE AND TANGEN AND AND AND ALTHUR THE THEORY OF THE TOTAL STATES AND A STATAL STATES AND A STATES AND
 898 GGTFATAATAAGAGGGTFGGATAGFAAAAAGTAGAAAATGATAGAGGATTALGGAG 957
 790 AATCITICIAAACGATACGAAGAAAIIIAICIIAAAAAIAAAGATCTAGAIGCAAGAIIA 849
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876 DAAGPTAGGAGTTGGALALGTAGTGAAATAAATTGTGGATTGGTGGTAAAAGTTTGLGG 129
 430 AICACAITIITATTAGATAAGGGAAGTATTACAAATGGAAGATGATGTGGTGATTTC 489
 490 IIICASIIAAISCIAISISISSISSISAKIAIFIIAITAAAVISTOAKKITOSAKIIGII 849
 550 AAAGAACCATATAAAACAGCTGTTATACCCATTAALGGTTCACCTCGAACACGCCGA 609
 NIH-MSC http://mgc.nol.nih.gov/.
National Institutes of Bealth, Mammalian Gene Collection (MSC)
 730 TTTATACCTTTTAAGAA FFCTCTTGGACTTGTAACA FCTAATGGACTTGCAGAGGT GAA
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 1030 CCIICAGAAAAIGIGAIDIGGIAHIIRAGAAGIGGAGAGIGAAIGG 1076
 Unpublished (1999)
Contact: Robert Strausborg, Ph D.
 Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
 HQ439221.1 G1:21178297
 (bases 1 to 1081)
 5', mRNA sequence.
HQ439221
 Homo sapiens
 human.
 DEFINITION
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/note-"urqun: testis: Vector: pCMV SpukT6; Site_1; Not1; Site_2: Sall; Cloned unidirectionally; oliqo-dT primed. Average insert size 2.5 kb. Library enriched for full length clones and constructed by tite Technologies. Note: thus is a NH_MGC Library."
 4214 GATATACHUTGTGCTFGTTTFAAAATTTTGCTTTTAATTAAATAAAAGCTGGAAGCAA 3273
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 2854 TGCCATTTAAAAAGTTGTAGCAGATTGTTTCCTCTTCTAAAAGTAAAATTGCTGTGTTA 2913
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 461 TOPPATTIANANATIGINGENGATIGITICCICTICCAAGIAAAATTGCIGIGITIA 420
 4.21 FIGATAGTAAGAATGGCCCTAGAGTGGGAGTCCTGATAACCCAGGCCTGTCTGACTT 480
 601 TITGATIGACIGCCCATICACCAAAAITAICCIGAAAAITAI 660
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 Migh quality sequence stop: 732. location/Qualitiers
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http://image.llnl.gov
 Conservative
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 Local Similarity
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PQ220275 981 kp mkNA linear EST 02 MAY 2002 ACHNGSER 7572621 NIH_MCZ_92 Roms apticus chuA cisan HMAGES644722
 Anote-"Organ: restins; Vector: pCMV-SP-RH6: Site_1: Noti: Site_2: Sall; Cloned unidirectionally; oliqo-dT primed. Average insert size 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NHH-MFC Library."
 Eukaryota, Metazoa, Chordata, Chambata, Vertebrata, Euteleostomn,
Mammalia, Eutheria, Primates, Catarrhini, Hominsdae, Homo.
 3274 AGTATAARCATATGATAGTATGATACTIGAAACAGATTGATACTTCAGAATGTAAAA 3433
 NIH-MGC hite: Zenar noi nih arwiz.
National Institutes of Health, Mammajian Gene (Gilection (MG))
 THE HITTELLE 464 AAATGGAAGATGATGTGATTTGATTTGAGTTAATGCTATGTGTCT LGACLATTTTA 523
 524 TTAAACTOTCACCTOCALGTTGCTCAAAGAACATATAAAAGACGTGTTATACCATTA 583
 584 ATGGTTCACCTCGAACACCAGGCGAGGTCAGAACAGGAGTGCACGGATAGCAAAAAAAC 643
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 Clone distribution: MGC clone distribution information can be
 61 TTAAACTCTCACCTCCCATGTTGCTCAAAGAACCATAFAAAAQAGCTGTTATAYCYATTA 120
 1 AAAIGGAAGAIGATCIGGATTICATIICAGITAAIGCIAIGTGICIIGACIAITITA 60
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 cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
 : 7
 24.9%; Score 844.8; DB 14; Laugth 881; 99.0%; Pred. No. 1e-152; tive 0; Mismatches 7; Indels 2;
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/!ab_host-"DH108 (phage-resistant)"
 DNA Sequencing by: Agencourt Bioscience Corporation
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Contact: Robert Strausberg, Ph.D.
 High quality sequence stop: 690
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 Email: cgapbs remail.nth.gov
Tissue Procurement: ATCC
 Location/Onalitiers
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 (bases 1 to 881)
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HQ220275
 Conservative
 Homo sapiens
 Local Similarity
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 human.
 Matches 871;
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181 TAGAAAATGAFACAAGAATATTGAAGTTCTCTGTAAAGAACATGAATGTAAGATGAGATG 240

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AGENTRURILG480807 NIH_MSC_92 Home Sapiens contaction IMAGE 5575683
 Homo sapiens
Enkaryeta: Metazoa: Chordata: Craniata; Vertebrata: Enteleostomi;
 944 AIGIAALIOCTCCACACACIGCARTTAGGACTGTTATGAACACTATCCAACATTAAGGA 1003
 1004 IGAITITAAATICAGCAAGTGATCAACCTTCAGAAAATCTGATTTGGTATTTAAGAACA 1053
 1124 AAGAGAAALIJOOTAAAAGOTGIGGACAGGGTTGTGGGAAATTGGATAGATAGA 1183
 1194 AACTIGGAVITCGCTTGITATTAGGANITAATGGAATGGGTTAAATGAAGAAGAAG 1243
 244 GATTAFGATTGAAAATTTTAGCAAAGTGIGAATGAGAACA-TTTTTGATAFGF-CTTT 1301
 764 CATCTAATGGAGTFFCCAGAGGFFGAAAFCFFFFCTAAAGGATAGGAAAFFFFFFFAFCFFFA 823
 CONA Library Preparation: Life Technologies, inc. CINA Library Arrayed by: The L.M.A.G.E. Consortium (LLML) DNA Sequencing by: Apparount Bioscience Corporation Cloud distribution: MGC clone distribution information can be tound through the L.M.A.G.E. ConsortLum/LLML at.
 7.4 AGGIGAAAATGTITAITICAAAAATTITATACCTTTTATGAATTCTTGGAGTTGTAA 763
 884 CIATAGACAGTITITGAAACACAGAGAAACACGCAFGAAAAAGTFTGAFGAAGGFGA 943
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National Institutes of Health, Mammalian Gene Collection (MGC)
 Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
 1 402 ATTGGCGTGCTTGAGGTTGTAATGGCCACATATAGC 1341
 Plate: LLAM12326 row: f column: 04
High quality sequence start: 17
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 Email: cqapbs-r@mail.nih.gov
 Lissue Procurement: AICC
 BM475603.1 GI:18524645
 http://image.llnl.gov
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/tissuc_type="cmbryonal carcinoma, cell line"
/tab_host="DB10B (phage-resistant)"
/note="Coran: testis, vector: pCMV-SPORT6: Site_i: Not1: Site_2: Salt: cloned unidirectionally; cliqcoff primed. Average insert size 2.5 kt. Library carriched for full-length clones and constructed by Life lechnologies. Note: this is a NIH_MGC_isbrary."
 971 GGACLGITATGAACACTAICCAACAATTAATGATGATTITAATTCAGCAAGTGATCAAC 1030
 371 AACCCAGCAGTTTCGATATCTAGTCAAATTACTGGATTGGTGCTAAAAGTTTGTTGGA 430
 491 PTCAGTTAATGCTATGTGCTTGACTATTTATTAAACTGTGACTGCTGCCATGTTGCTCA 550
 551 AAGAACCATATAAAACAGCIGTTALACCCATLAATGSTICACCTGGAACAGGGAGAG 510
 252 ASANATISATASCINGIASZAAASIISAIAAIAISISAIGISAAGACIGIIGAAGAAGAASIAIGA 311
 ICACALITITATEAGGIAAAGGGGAAGIA1IACAAAIGGAAGAIGAIGGIGA111CAI 450
 K71 TICTICTGAARAAAAATIGAALGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATT 730
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 583 ATCITICTAAACGATACGAAGAAATITATCITAAAAATAAAGATCIAGAIGGAAGAIIAI 542
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 911 CACCACAAAAGTAACCTTGAIGAAGAGGIGAAIGTAAITCCTGCACACACACICAGIIA 970
 312 TOTATTOTTTOCACTOTTCACCAAATT GAAAAGGACATGTGAACTTATATATTTGACAC
 223 TCACATTTTTATTAGGTAAAAGGCAAGTATTAGAAATGGAAGATGATGTGGTGATTTTCA!
 463 ITCICIGIAAAGAACAIGAATGIAATAIAGAISAGGISAAAAAIGIIIAIIICAAAAAAI
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 DB 13; Length 1001;
 Indels
 40;
 Score 786; DB 13;
Pred. No. 2.1e-141;
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 0; Mismatches
 /orqanism-"Homo sapiens"
High quality sequence stop: 734. Location/Qualifiers
 /db_x1e1-"taxon:9606"
/clone-"lMAGE:5575683"
 186 g
 23.2%,
95.1%;
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 Matches 833; Conservative
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 Similarity
 349 a
 Query Match
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Anote "Ordan: ovary (pool of 3); Vector: pCMV-SPOR16, site 1: EcokV (destroyed); Site 2: Not1: KNA source pool of three ovaries, from Females ranging in age from 38 to 49 yo. Library is oliqo-dT primed and directionally cloned (EcokV site is destroyed upon cloning). Average insert size 2.1 kb, insert size range 1-3.5 kb, Library is constructed by C. Gruber (Invitrogen), keseatch Genetics tracking code 036.
 ВМ5458HI
AJENYOURI_6505183 NIH_MGC_125 Homo sapieus cDNA clone IMAGE:5588245
 Bukaryola, Metazou, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
 2.559 FT/0005A/TT/CTGAGAAATTAAAATAAATGAGATGGTATGTAAGTAACAGGGACGGTGTG 2418
 2419 CLCAAAAGAAGTGCTGAAGGAAGCAGCTGCTAAACCAGTGAAAAAAGTACGCTTTGAT 2478
 2479 ALLBARGIALGAGAIGAAOPAGAIGGAAGIAAAGAIGTGGAGGAGIGGAAATITGAG 2538
chan library Proparation: Life technologies, Inc., clan Library Arrayed ky: The L.M.A.G.E. Consortion (LLNL) has Sequencing by: Appropriate Corporation Choice distribution: MGC clone distribution in MGC clone distribution intermation can be found through the L.M.A.G.E. Consortium/LLNL at:
 400 CTCAAAAGAAGTGCTGAAGGAAGTAAGCTACTTAAACCACTGAAAAAACTACGCTTTGAT 359
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| NIH-MONT http://mgc.uci.nih.gov/.
| National Institutes of Health, Mammalian Gene Collection (MGC)
 6; Gaps
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 2 others
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 BB+ TATACCGGAAAAGAAGGCGTAAGGAATATAGGAATAA 91B
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/lab_host-"DH10B"
 /ordanism-"Homo sapiens"
 Contact: Robert Stramsberg, Ph.D.
 Migh quality sequence start: 48 High quality sequence stop: 773.
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 Lissue Produrement: Invitrogen
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 Local lon/Qualitiers
 Email: eqapbs ramail.nih.qov
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 bitp://imade.llnl.dov
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 , mkNA sequence.
 Matches 827; Conservative
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 EST (Foustka, A., Wellenteuther, K., Mewes, H.W., Well, B. and Wiemann
 Poustka, A., Wellenreuther, R., Mewes, H.W., Weil, B. and Wiemann, S.).
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eureleostomi,
 2599 ACCATGGATACCTCAAACAAGGAAGAAATGAGGATCTCAGGACTTGGTGGACATTT 2658
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 2719 TTATGGCCACATTAATATCTTCAGCTCTTTTGFGGATATAAAATG1GCAGATGCAATT 2778
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 3019 TAATITATA--TGTATATTITITITATITAAOATGAA CACCCTTAGAAAAFGTGTCCTA +075
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 420 CAGAAACTGGCAGAAATGACTTCTACTCGAACACACATG AAAAG AGAAATGAATGAT 479
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DKEYp31300816 5', mkNA sequence.
 2959 CCTGTCTGACTACTTTGCCTTGTTTTGTAGTAAAGGTGALGTTDGTFCTTGTTTAT
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 Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo.
 Department Lebrach
Max-Planck Institute for Molecular Genetics
 This is the 5' sequence of the clone insert
 Email: poustka@mpimq-berlin:dahlem.mpq.de
 THENA
 The strasse 74, 14195 Heriin, Germany Tel: +49-30-84131623
 727 Lp
 3195 TATTITACTATIGGAATCIGATATA 3219
 1078 TATTTTACTALTGAAAAACGAAIA 1102
 AL597811.1 GI:15160502
 Contact: Poustka A.J.
 Fax: +49-30-84131128
 (bases 1 to 727)
 Unpublished (1999)
 Homo sapiens
 A1.597811
 AL597811
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Cloue from S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (MRZ), Phail s.Wiemannakiz heidelberg.de; sequenced by DRZZ (German Cancer Research Center, Heidelberg/Germany) within the cDNA sequencing consortium of the German Genome Project.
 /note-"Vector. FTriplix2, Site_1. SfitA, Site_2. SfilB, cDNA-collection"
 This clone (DKFZp31300816) is available at the KZPD in Berlin. Please contact the P2PD-Pressourcementrum, Heutherwey 6, 14059 Berlin-Charlettenburg GEPMANY: Email: clopedring de
 1830 AAATAGACIIIIGTGAAGGGGTTGIGTGTGAGGAGGGAGAATTAGAAGATATGATGTGGAG 1889
 LICO ANICALIGIAACAGCATACAAAAATATTIAATAATATTAAGGAGAGATATTAAGGAGAGTATTIAAAGGAGAGTATTIAAAAGAAAAGTATTI 2069
 2076 IIIGAICAAAGAAGAGGGAGTATGATTCIATTATAGTATTCTATATAGTTCGGTCTTCATGCA 2139
 21.48 GAGATTGAAAAQAAATATTTGCAGTATGCTTGGAGGAGGAGGAGTAGTTGTGAGAAT 2189
 ZIMB ACTIVACALICCICGAAGOCCITACAAGITTCCIAGITTCACCCTTACGGAITCCIGGAGG 2249
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 Location/Qualifiers
 No sl sequence available.
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AGENCOURT_7566045 NIH_MGC_92 Home sapiens CDMA clone IMAGE:6041563
 Eukarycia, Metazca, Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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 /Lissue_type="embryonal carcinoma, cell line"
/lab_nost="DinOB phage resistant"
/note="Organ: testis: Vector: pCMV SPOR16; Site_1: Not1:
Site_2: Sall; Cloned unidirectionally; oligo-dT primed.
Average issert site_2: Kt. Library enriched for
Lull-length clones and constructed by Lite Fechnologies.
Note: this is a NIH_MGC_Library."
 CONA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by. The I.M.A.S.E. Consortium (LINE) DNA Sequencing by: Appropriat Risoscheme Corporation Clone distribution: May clone distribution information can be found through the I.M.A.S.E. Consortium/LLNI at:
 R.m MSC http.//Egrinci.sih.ger/.
National Institutes of Health, Mammalian Gene Collection (MSC)
Unpublished (1999)
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 241 GAACCATATAAAACAGCTGTTATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGT 300
 313 GIATTICCACTICTTCAGCAAATTGGAAAGGACAIGIGAACTTAIATAIIIGACACAA 372
 433 ACATTTTATTAGCTAAAGGGGAACTATTAGAAATGGAAGATGATCTGGTGATFTGALLT 492
 493 CAGTTAATGCTATG1GTDCTTGAGTATTTTAT1AAAG1G1CAGG1GCGA1G1TGC1GAAA 552
 553 GAACCATATAAAACAGCTGTTATACCCATTAALGGTTCACCTGGAACACCCAGGGGAGGT 612
 DB 14; Length 880;
 Indels
 21.2%, Scorc 720.6; DB 14, 98.7%; Pred. No. 8.6e-129; Pred. No. 8.6e-129;
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 Contact, Robert Strausberg, Ph.D.
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HQ222227
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 Local Similarity
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 747;
 Ouery Match
 source
 DEFINITION
 ORGANISM
 BASE COUNT
 ACCESSION
 Matches
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 REFERENCE
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bNA Sequencing by: Incyte Genemics, Inc.
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RESULT 11 AL553757/c

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 Zhorto "Organ: brain, Vector: pCMVSDOPT 6: 1st strand cDNA was primor with a north-oligo(di) primor by primor prime end entiched, double stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6
 vector. Library was normalized. Library was constructed by Life Technologies. Contact: Feng Liang Life Technologies, a division of Invitrogen 9800 Medical Center
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Mammalia; Eutheria, Primates, Catarrhini; Hominidae; Homo.
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 Drive Reversite Maryland 2086, 02A Pay: (3) 301-610
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Email: segret@genoscope.cns.fr, Web : www.genoscope.cns.fr.
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 Contact: Robert Strausberg, Ph.D.
Email: cgapbs ramain.nh.gov
Tissue Froutement. CLONTECH Laboratories, Inc.
cDNA Library Preparation: CLONTECH Laboratories, Inc.
cDNA Library Preparation: CLONTECH Laboratories, Inc.
cDNA Library Artayed by: The L.M.A.C.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MC clone distribution information can be
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NIH-MGC http://mqc.nci.nih.qov/.
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 Contact: Robert Strausberg, Ph.D.
 Email: eqapbs-r *mail.nih.qov
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 Unpublished (1999)
Matches 747; Conservative
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Noie: Life is a NHE_MST Library."

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 cDNA Library Preparation: Lite lecthnolognes, Inc. CDNA Library Arrayed by. The L.W.A.S.E. Consortion (LLNL) DNA Sequencing by: Apercount Bioscience Corporation (LLNL) Clone distribution: MRC clone distribution intormation can be found through the L.M.A.G.E. Consortium/LLNL at:
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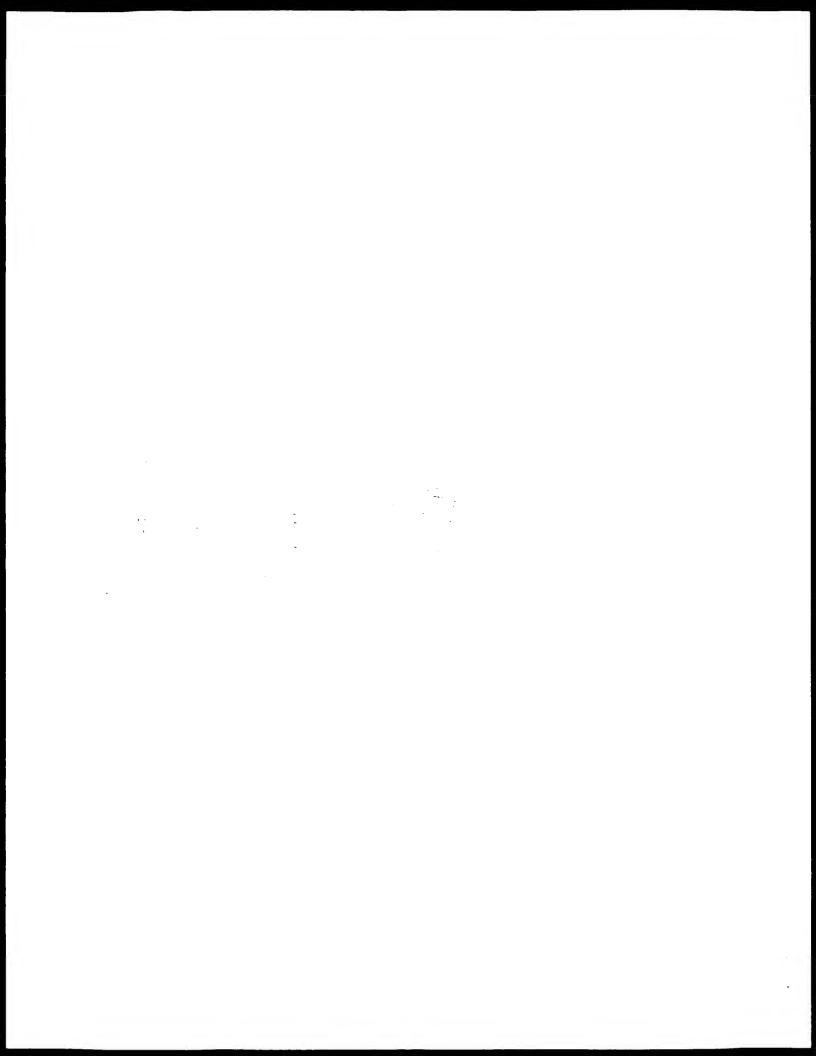
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January 17, 2904, 18:27:24; Search time 1933.57 Seconds кап оп.

(Without alignments) 7320.587 Million cell updates/sec

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FOST processing: Minimum March 0% Maximum March 190%

Listing lirst 45 summaries

\*\*Administrate parameters: Medical new virth of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state OUTFMIT pto NORM ext HEAPSIZE-500 MINLEN-0 -MAXLEN 200000000 USER USD90-25459 FON 1 1 18175 Transt 16012003 1521 B 23322 NORW-6 1CPU 3 No XLEYX NO, MAD -LAPOTEDEPE NORS, 2006ES 9 -WALL LOWGLOG -DRV\_31ME001-120 WARN FIMEOUT-30 -THERMOS 1 XMEMOD-10 -XMAPEXT-0.5 FORD-6-6 FGAPEXT-7 VARPOP-10 FGAPEXT-0.5 DELOP-6 -DELEXT-7

totabase .

\* - miri em dss pln:\* em qss yrt:\* em qss fum:\* 488 mams\* \* Con dss inv: estium:\* em estini.\* em estpl:\* em\_estro:\* em\_bre:\* qb\_est4:\* qb\_est5:\* em estmu:\* em estha:\* 4b est 2:\* qb est 4;\* qb. est 1:\* 385 db dss: Ē =

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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| Trans. 1.4 |            |                       | 1         |                      |          |                                 |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------|------------|-----------------------|-----------|----------------------|----------|---------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| į.         | N          | Score                 | Match     | Match Length DB      | DB       | ID                              |   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1          | -          | 6291                  | ,         | 7.00                 |          | AK011.46                        | - | AKUTIZA6 Mas museu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 2          | 1551                  | 14.4      | 1051                 | ~        | BM561083                        |   | 181                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | ~          | 1448                  | 42.1      | 8H1                  | 14       | BQ22/1275                       |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|            | 4          | 1339                  |           | 1001                 | _        | BM475604                        |   | BM47560 + AGENCERRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | ۔ د        | 10 L                  |           | r - 3                | , ·      | ALC:97811                       |   | Al. 57811 DKF2p 41 45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|            | C P-       | 200                   |           | 0 W                  |          | MAA CACA                        |   | MARKER ACENCYCHEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|            | - 30       |                       | 24.7      | 10.23                | _        | BM4 500 8]                      |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| C          | J          | 1056.5                |           | 4.14                 | 5        | AA76:411                        |   | >                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| C          | 10         | 1043                  |           | 202                  | ث        | AL56 4757                       |   | ALL:6 (752 ALS:6 (752                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|            | 11         | 10 47                 |           | 605                  | 5        | AL599644                        |   | ALSSS633 DKEZp314P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ٤          | 7.7        | 10 40                 |           | 6.94                 | 2        | HE082846                        |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| :          |            | 9101                  | 22.6      | 624                  | _ :      | AW58 181                        |   | AWSB41B1 id11h09.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ŀ.         | ÷ 4        | 7001                  |           | r) 3                 | yı -     | AA / 10 4485                    |   | AA (6.448% VW54h01.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|            | 1 4        | # 00 T                |           | 1 3                  | 1 -      | 150.27 17 40 4<br>NEUTO C. 17 4 |   | 8/75447000 9 #CY 1708                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|            | <u>-</u> - | 0.76                  | 71.7      | 7.00                 |          | AW 3562 44<br>B1151568          |   | AWAYSZA4 CMA HIULB<br>WIISISSA KUNULKINS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|            | æ          | 595                   | 21.3      | 544                  | . =      | AV715533                        |   | AV715544 AV715544                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|            | 7.         | 955                   | 21.2      | 584                  | 1.2      | BC149050                        |   | MG149050 WHRRCO], V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | 36         | 947.5                 | 21.0      | 7+4                  | C4       | BF144857                        |   | RF144857 601790343                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 21         | មាន<br>មាន            | 20.8      | 5.49                 | æ.       | AL692790                        |   | ALC92790 DKF2p4141                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 64<br>64   | 933                   | 20.3      | 3 8                  | Ç        | A1646038                        |   | ATEAGORE UNDAGED.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | ~ .<br>⊖ . | 806                   | 20.5      | 7.67                 | O .      | BE539278                        |   | BE549278 601064567                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | ₹ 1        | 00 0<br>00 0          | 9.        | n , t                | ۽ حي     | A:: 20941                       |   | ALLEGATIONERPRESENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | 20 C       | 2.079                 |           | 44.                  | ~ .      | 28652518                        |   | H1526982 602927377                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ç          |            | . a                   |           |                      | 2 2      | 77                              |   | 10 E. V. 10 E. E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. C. 10 E. |
| . ر        | . ec       | 8<br>8<br>8<br>8<br>8 | 18.7      | 484                  | 1 =      | BE168045                        |   | METSHOUS MICH. HIGH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | 58         | 833.5                 | 18.5      | 646                  | _        | BM490416                        |   | BM490416 pqp2n.pko                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | Ç.         | 824                   | 18.3      | 493                  | 10       | AW502887                        |   | AWSOZHBZ UT HF HND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | Ξ          | L)  <br>61  <br>50    | - 1<br>80 | 14<br>14<br>15       | ţ.       | AA372785                        |   | AAN72780 BB76405.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | Ţ.,        | 3.5                   | u         | 7.39                 | ص        | A1646097                        |   | A16460762 VW54107.X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | * *        | X                     | 4 4       | \$ 807               | :<br>:   |                                 |   | BM45-6728 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|            | er Li      | 7.07                  | 16.7      | * id<br>6 - 4<br>• 4 | <u> </u> | AAUG08314                       |   | AWSO 3514 OI BERNE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | <u>_</u>   | 727                   |           | 54.5                 | , =      |                                 |   | ACTOR VW24M01.5<br>WFF45220 of 24c013 ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| U          | 3.7        | (0)                   | Α.        | 46.2                 | اد .     | <                               |   | A1006129 9527408.V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ü          | æ          | 683                   | 15.2      | <b>₹</b>             | ~        | BF827047                        |   | BFB27047 RC3 HNGOZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 3.9        | 681.5                 |           | 466                  | 14       | C82304                          |   | CB2304 CB2304 Leuk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 0          | 9                     |           | 651                  | ~ :      | 131696841                       |   | B1696841 603344967                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | 4          | 629                   | 14.6      | (H)                  | 10       | AW951604                        |   | AWY51604 EST 36 4674                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|            | 2:         | ~ -                   |           | 523                  | J        | AA959709                        |   | AA319709 VW54a04.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | r =        | 0 4<br>0 5<br>0 5     |           | (75)                 | 2 :      | MEZ85796                        |   | MEZHS/96 h01096510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|            | e 1        | 71.0                  |           | 7                    | ** C     | ب بر<br>د عد<br>د د             |   | D:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ٠,         | ्          | 679                   |           | 770                  | 7        | 14F466546                       |   | 3012 X 11 3 4 5 4 3 4 1 1 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

RESULT 1 AK011246

AK011246 1464 bp mRNA linear HTC 19 JAN 2002 Mus musculus 10 days embryo whole body cDNA, RIKEN 1011 length curiched library, clong:2609017M22:retinoblastoma 1, full insert DEFINITION

AK011246 ACCESSION VERSION KEYWORDS SOURCE

Mas musculus (strain:0578L/63) 16 days embryo chwa to mkwa, elone\_lib:RIKEw full-length enriched mouse chwa library clone:2609017M22. AK011246.1 GI:12847243 HTC; CAP trapper.

Mammalia: Butheria: Rodentia: Sciuroquathi: Muridae: Murinae: Mus. Eukaryota; Metazoa; Chordata; Cranigta; Vertebrata; Euteleostomi; Mus musculus

ORGANISM

dss orbers:

\*:ord\_sst +: pol\_ssp\_m+

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Kawai.J., Shinaqawa.A., Shibata.K., Yoshino.M., Itoh.M., Ishii.Y., Arakwa.T., Hara.A., Evkunishi.Y., Konno. H., Addehi.J., Fukuda.S., Arakwa.T., Izawa.M., Nishi.Y., Kiyosawa.H., Kondo,S., Yamanaka.J., Sairo. I. (Karak.M., Nishi.Y., Kiyosawa.H., Kasukawa.T., Saito.R., Kadota.K., Matsuda.H., Ashburner.M., Batalov.S., Casavan.T., Fleischmann.W., Gasterland.T., Gissi.C., Kinq.B., Kochiwa.H., Kuchi.P., Lewis.S., Matsuo.Y., Nikaido.I., Pesole.G., Ouackenbush.J., Schriml.L.M., Staubli.F., Furuno.M., Aono.H., Wanner.L., Washio.T., Sakai.K., Oklou.T., Furuno.M., Aono.H., Haldaroll., R., Farshi.G., Hake.J., Hoffell.D., Bojunga.N., Carninci.P., Hake.J., McMacafell.M.J., Bull.G., Carninci.P., A Brownstein.M.J., Bull.G., Fletcher.C., Fujita.M., Gariboldi.M., Gustincich.S., Hill.D., Mormann.M., Hume.D.A., Kamiya.M., Lee.M.H., Lyons.P., Matchionn.L., Mashima.J., Mazcarolli.J., Mcmbacrts.P., Nordonc.P., King.B., Ringald.M., Schonbach.C., Soyat., Shibata.Y., Storry, R., Schonbach.C., Soyat., Shibata.Y., Storry, R., Storry, R., Wang.K., Storry, R.,
 Adachi, J. Alzawa, K. Akahira, S., Akimura, T., Aono, H., Arai, A., Arakawa, F., Raidarvili, P., Bono, H., Brownstein, M., Bult, C., Carner, P., Puruno, M., Handaki, T., Hara, A., Hayatsu, N., Hill, D., Hiramoto, K., Hirawa, T., Hori, F., Hume, D., Imotani, K., Ishi, Y., Itoh, M., Isawa, K., Karokawa, T., Katihara, C., Matsuyama, T., Miyazaki, M., Korda, M., Kora, S., Kithara, C., Matsuyama, T., Miyazaki, K., Nomura, K., Nomuraki, R., Ohno, M., Okaz, C., Ouackenbush, J., Saito, H., Saito, R., Sakai, K., Sano, H., Sasaki, D., Schita, R., Shibata, K., Suzaki, M., Saito, H., Tabaka, T., Yamanaka, I., Yamanaka, I., Yawatida, Y., Shibata, M., Muramatsu, M., and
 Shibara, K., Iroh M., Alyawa, K., Nagaoka, S., Sasaki, N., Carninol, P., Korono, H., Akiyama, T., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., ishi, Y., Nakamura, S., Havama, M., Nishino, I., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikogami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Irawa, M., Ohara, E., Watshiwagi, K., Yoneda, Y., Ishikawa, T., Orawa, K., Tanaka, I., Matsuada, S., Kawai, J., Piken intearated sequence analysis (PISA) system: "Matsual Shi, Y., Muramafsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., Piken intearated sequencing pipeline with 384 multicapillary sequencer.
 Carminci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Komo, H., Okazaki, Y., Miramaisu, M., and Bayachi, Ali, Y., Miramaisu, M., and Bayachi, Ali, Y., Normalization and subtraction of captifapper selected churs to prepare toll-length discovery of new genes Conomo Res. 10 (10), 1417-1430 (2000)
 Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Rosearch (KKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Volvohama Institute: 17-22 Stobirc cho Tentimicky Volvohama Institute: 17-22 Stobirc cho Tentimicky Volvohama 230-0045, Japan (B-mail:genome-resease.riken.go.jp, URL:http://grnome-gro.jp/.
 Wyoshaw Boris,A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohtsuki,S
and Hayashizaki,Y.
 Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
 High efficiency full-length cDNA cloning
 Meth. Enzymol. 303, 19-44 (1999)
 Carmine's pland Hayashizaki, v
 (bases 1 to 1364)
 Direct Submission
 Hayashizaki,Y.
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 División of Experimental Animai Research in Riken contributed to propare mouse tissues. First stranc cDNA was primed with a primer [5, GAGAGAGAGAAGAGACATETTTTTTTTTTTTTTTTTTT = CDNA was
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 340 pGInProSerGluAsnLouille-SerTyr PhcAsnAsnOysThrVal AsnProJysOl 359
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 1998 GCGAGGTCAGAACAGGAGGGATAGCAAAACAAGTAGAAATTGATACAAAATTAT 1127
280 gl.cuPhet.euAspHisAspLysThrLeuGlrdhrAspSerileAspSerPheGlufhidl
 320 oValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAhnSerAluSerAs
 859 uSerileLeulysArgVallysAspile()ytyille
 Max Planck-Institute for Molecular Genetics
Threstrasse 74, 14165 Berlin, Germany
Tel: 449-30*84131623
 Email: poustkasmpime borlin dahlem.mpq.de
This is the 5' sequence of the clone insert
 376 -- PheAlaLysAlaValGly 381
 938 TTCTGGCIAAAAGCCIGGGG 957
 German Cenome Project
 Contact: Poustka A.J.
 Fax: -49-30-84141128
 Department Lehrach
 Unpublished (1999)
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Apple="Westor pTriplex2: Site_1+ SIIIA; Site_2+ SIIIB; CDNA_collection"
No SI sequence available. This clone (DKFZ031300816) is available at the RZPD in Berlin. Picase contact the RZPD: Ressourcenzentrum, Heubnerweg 6, 14059 Hotin Charlottenburg, GTRMANY; Fmail: clone@rzpd.dc. Location/Onalifiers
 649 | HometmetCyssermetFyrcly|| APPS1|ysV3|HysAsn|HeAspleUlysDbcLys|| 6£8 | HELLH|| HILL|| HI
 589 PysSorthreori onSortopPhoTyriystysValTyrArglosAlaTyricuArglou 608
 7.2 / LeubherdinHisThrLeudinAsnGluTyrGluLeuMetArqAspArqHisLeuAspGln 648
 669 IletteValThrAlaTyrLysAspLeuProHisAlaValGlnCluThrPhoLysArqVal 688
 889 LeufleLyschadhadhuTyrAspSerfleIleValPheTyrAsnSerValPheMetGln 708
 749 AsulleTyrileSerProLeuLysSerProTyriysileSerflyGlyLeuProThrPro 768
 789 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArgValLeuLysArgSer 808
 609 AsnThrLeuCyscluArqLeuLeuSercluHisProdluLeucluHusHelleIIgraphr 628
 122 CITITECAGOACACOCIGCAGAATGAGTATAAACTEAGAGAGAGAGATTIGGAACAA 181
 2 AAATOTACCTTGTTTGACTGTITTATAAAAAAGTATATGGGCTAGGTATGTAGGGCTA 61
 809 Aladled geranner Profysbotoutystysteletaryheksptlettlettillettill
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 /organism-"Homo sapiens"
/db_xrel-"taxon.9606"
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890 bp mRNA (16.car i.3) 3, MAY 2002
AGENCOUPT_7566045 N.H_MGC_92 HOMO Supiens CONA Clone (MASL:16.041563
 /tissue_type="wmbigonal carcinoms, cell line"
/lab_host="pHION" (phage="cesistant)"
/note "Ordan - testis, Vector, pGMV-SPORT6; Sile_i: NotI:
Site_2: Sali; Cloned unidirectionally; oligo-df primed.
Average insert size 2.5 kb. Library enriched for
full-length clones and constructed by life Technologies.
Note: this is a NH=MCC Library."
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enteleostoni; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1. (bases 1 to 880)
MIR NAT Enteleos (Sept. 2012) 2013 (1922)
MIR NAT Enteleos of Health, Mammalian Gene Collection (MGP)
Unpublished (1999)
 DNA Sequencing by Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I M A G E Consortium/LLNE at:
 123 ProScrScrScrHeSerthrGluffeAsnSerAlaLeuValLeuLysValSerTrpff.e 142
 662 GUTGAAGGAAGCAACCUTUTAAACACTGAAAAAQTACGCTTTGATATTGAAGGATGA 721
 103 ValbarkanlalearkasorlysLeuGlaArqThrOysGlaLeuIleTyrLeuThrGDn 122
 1 GTATIGITIGGACTOTICAGCAAAIIGGAAAGGACAIGIGAACTIAIATATATITIGACAAA 60
 143 ThrPheLeuLeuAlaLySGlyGluValLeuGlnMetGluAspAspLeuVallleSerPhe
 cDNA Library Freparation. Life Technologies, Inc. cONA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
 880
255
6
 Conservative:
 Mismatches:
Indels:
 http://image.llnl.gov
Flate: LLAM13279 row. i column: 20
 Length:
Matches:
 /organism-"Homo sapiens"
/db_xref-"taxon:9606"
/clone="IMAGE:6041563"
 Contact: Robert Strausberg, Ph.D.
 /clone_lib-"NIH_MGC_92"
 (1-880) x 825-459A-41 (1-874) x 825-527 (1-880)
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 Email: cqapbs-rémail.nih.qov
Tissue Procurement: AICC
 5', mRNA Sequence.
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 1.42e-122
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90.75%
27.45%
 Homo sapiens
 Best Local Similarity:
 829 AspGlu 830
 722 CATGAA 727
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 Percent Similarity:
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 Alignment Scores:
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BM454724 BST 05-FEB-2002 AGENCHIT 6402744 NIH_MGC_72 Home sapiens (DNA clone IMA3E.5528814
 Homo sapieus
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
 901 COGNACAGRASTOCACOGATAGOAAACAACTAGAAAATGATACAAAAATTATTGAAGTT 360
 20 f. CluAshArqSerAlaArq11eAlatySClnLeuGluAshAspVhrArq11e11eGluVat 222
 22 f. LendystysoladdisclarysAsnIleAspolaValtysAssValTyrPbeLysAsnPhe 242
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 chane distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
181 PASTIAATGGIATGTGGTOTTGACIATITALIAAACFCGGGGGGGGGGGGGGGGGAAA 240
 24.5 The ProPheMet Ash SerLendly LeuVal Thr SerAsh Gly LeuProShuVal GluAsh 262
 481 CTTTCTAAASGATACGAASAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTATTT 540
 10.4 ProArqLysSerAsnLenAspGluGlnValAsnVal11eProProHisThrProValArq 322
 323 ThrValMetAsmThrIleGInGInLeuMetMet.Hel.euAsmSerAlaSerAspGln-Pr 342
 442 oSerGluAsnLeuIle-SerTyrPheAsnAsnCysThrValAsn---ProLysGluSerI 361
 721 FICAAAAAFGIGATITLOGIAFETTAAGGGGTGGGGGGGGATGGGAAAGAAAGF 780
 National Institutes of Health, Mammalian Gene Collection (MGC)
 ---tysArqValLysAspileGlyTyrilePhe-- ---tysGluLysPhe 376
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 Plate: LLAMI2206 row: e column: 07
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Contact: Robert Stransberg, Ph.D.
Endil: eqaps r Mmall.nih.gov
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/ordanism "Homo sapiens" /db\_xret "taxon:9506"

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/lab_host="DH10B (phage-resistant)"
/mote="organ: skin; Vector: pCMV SPoRT6; Site 1; Not1;
Site_2: Sall; Cloned unidirectionally. Primer: crise di.
 Average insert size 2 kb. Library constructed by Litte Technologies."
 6i6 Leuserdhulfistrodhuleuchulfistletletrpfhrleuthechnlisthræuch 635
 636 ASBGTGTyrGTbLccuMctArqAspArqHtsLcuAspGTbTtcMctMctCysScrMctTyr 655
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 | HTT | HTT | HTTHHT | HTT | HTTH | HTHT | HTHT | HTHT | HTTHT | HTTH | HTTHT | HTTH | HTTHTH 496 LeuGluArqCysGluHisArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeu 515
 128 TGTCCTCTTAATCTTCCTCCAGAATAATGAGACTGCAGGAGATALGTATGTTFCTCTT 187
 556 ValArqSerProLysLysLysGlySerThrThrArqValAsnSerThrAlaAsnAlaGlu 575
 428 AAIGAGIAIGAACICAIGAGAGAGAGAIIIGGACAAAIIAIGAIGIGIIGGAIGIAI 487
 676 AspleuProHisAlaValGluGhtFhelysAraValleuHelyselletletlettyr 698
 696 AspSerilelleValPheTyrAsnSerValPheMergInArdLeuLysThrAshlleLeu ?15
 716 ChilyralaSerthrarqProPro- ThilogSerProffeProBisite ProArdSe 734
 516 PheAspt.cut1ct.ysGinScrt.ysAspArgGluGlyProThrAspHisLouGluScrAla 535
 536 CysProLeuAsnLeuProLeuGlnAsnAsnHisThrAlaAlaAspMetTyrLeuSerPro
 576 ThrGinAlaThrSerAlaPheGlidThrGinLysProLouLysSerThrSerLeuserLeu
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 /tissae_type="melanotic melanoma"
 Matches:
Conservative:
 Mismatches:
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 Indels:
 Lengt h:
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Zelone-"IMAGE:5528814"
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31.04%
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 /clone "IMABLESSENC."
/clone.lb="N"H=MGC_72"
/tissue_type="melanctic melancma"
/lab_hos1="DBIOB (phage-resistant)"
/selo "Argan skin Vector pCMV-SPNFTC, Site_1 Not1.
/selo "Argan skin Vector pCMV-SPNFTC, Site_1 Not1.
/selo "Argan skin Vector pCMV-SPNFTC, Site_1 Not1.
/selo "Argan skin Uportor pCMV-SPNFTC, Site_1 Not1.
 Homo, supports
Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
Mammalia: Eutheria: Primates: Catarrhini: Hominidae: Homo
I (bases: Lo 1023)
NIH-MGT http://mgr.coi.oib.gov/
 Clone distribution: MGC clone distribution information can be tound through the I.M.A.G.E. Consortium/LLNL at:
 659 LysValLysAan!!eAspteotysPhetysThetteValThrAlaTyrtysAsqtooPro 678
 719 SerThrArgProProThrLeuSerProIleProHisIleProArgSerProTyrLysPhe 738
 National Institutes of Health, Mammalian Gene Collection (MGC)
 674 HisAldValGinShiThrPhelysArgVallentieLysGlnGlnGlnGlnGlnGlnGlnGrnTyrAspSertie 698
 699 IleValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeuGlnTyrAla 718
 739 ProserSerProLeuArgllePreClyClyAsalleTyrlleSerPreLeuLysSerPro 758
 2 AAAGIGAAGAATATAAACTTAAATTCAAAATGATTGTAAGAGGAIAGAAGGAICITGCI 61
 CONA Library Preparation: Life Fechnologies, The CLAA Library Arrayed by: The L.M.A.G.E. Consortium (LLAL)
 DNA Sequencing by: Agencourt Bioscience Corporation
 Conservative Mismatches:
 28) t
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 Contact: Robert Strausberg, Ph.D.
Email: cqapbs-rémail.nih.gov
Tissue Procurement: ATCC/DOID/DIP
 http://maak.llal.do.
Plate: LLAM12204 row d column.
 /ordanism "Homo saplens"
/db_xret="taxon.9606"
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 BM450031.1 GI:18499071
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 mKNA sequence.
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 Best Local Similarity:
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 Percent Similarity:
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W46404-11 SOATES_MARMANIMM MUS MINSCHINE CHONE CHOICE
WASDEL247598 5' SIMILAT to BENM5400 HITHORIAASCMA ASSOCIATED
PROTEIN (HUMAN); 9b:M26391 Mouse retinoblastoma susceptibility
 Marra, M., Hiller, L., Allen, M., Bowles, M., Dictrich, N., Dubuque, I., Geisel, S., Kucaba, T., Lacy, M., Le, M., Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Enderwood, K., Moore, R., Theising, B., Wylle, T., Lennon, G., Soares, B., Wilson, R. and Waterston, R.
 /note="Vector: pT73D-Pac (Pharmacia) with a modified polylinker; lst strand cDNA was prepared from mammary gland tissue from a lactating female, and was then primed
 Eukaryota, Matassa, Chordata, Craniata: Vertebrata: Eutelecatomi:
Mammalia: Eutheria: Rodentia: Sciurognathi: Muridae: Musinae: Mus
1 (bases 1 to 914)
 This clone is available regalty free through LLNL , contact the IMAGE Consortium (info@image.llnl.gov) for further information.
 819 TystysLeuArqPheAspIleSluGlySerAcpSluAlaAspGlySerLysHisLeuPro 848
 759 TyrLysileSerGluGlyLeuProThrProThrLysMetThrProArgSerArgileLeu 778
 839 ClyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 858
 779 ValSer (1.601)/01.05 or Diacty (1.72) (1.73) (1.73) (1.73) (1.73) (1.73) (1.73) (1.73) (1.73) (1.73) (1.73)
 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
 859 LysGiniysMetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
 /clone_lib="Soares_mammary_gland_NMLMG"
 WashU-HHMI Mouse EST Project
Washington University School of MedicineP
 Seg prime: 28ml3 rev2 ET from Amersham
High quality sequence stop: 422,
Location/Qualifiers
 /sex-"female (lactating)"
/tissue_type-"mammary aland"
/lab_host="DH10B"
 Contact: Marra M/Mouse EST Project
 /organism÷"Mus musculus"
/db_xref="taxon:10090"
 Email: mouseest Awatson.wustl.edu
 The WashU-HHMI Mouse EST Project
 protein (MOUSE);, mRNA sequence.
 /clone-"IMAGE:1247598"
 AA763411.1 G1:2813158
 Unpublished (1996)
 Tel: 314 286 1800
Fax: 314 286 1810
 house mouse.
 Mus musculus
 MGI:661286
 AA763411
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With a Not 1 oliqo(df) primer. Double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco RI sites of the modified pTZT3 vector. Library is normalized. Library mass constructed by Bertia Soares and M. Falima Bonaldo. " 178 c 257 q 261 g. ! others 522 SertysAspAraGleCtyProThrAspHistxaGleSerAlaCysProfeaAsnicepto 541 122 ALPAAAGLOGAAGPPAACHIDAPAAGAGAAAIGALAAAAACATTTAGAAAGALGTGAGCAT 263 GATAACCITGAACCIGCITGICCICICAGCCIGCCI 146 942 LenglnAshAshHisThrAlaAlaAspMetTyrLenSerProValArqSerProLysLys 561 914 TILITIGGATOCAGAATAAAACCCTCGAGCTGT - TCCTTTAGGCCTTTTTAAAGCGGGAG 857 856 ACHCCARDGAAAACCACCTIGI-GAAGGGCCAAACCGGGTTACTGCCGGAGGGGGGGGTT 798 42 ProSerGluAsideuffeSerlyrPheAsiaSuCysThrValAsinProGysGluSerfle 361 2.0. CONTRABATATORITE TROUTCITATATATIGGGCCGGGIAACCCAAAAAAATICCC 679 (R. Classychyskalslaties)pserslaAraTyrLysLeasibValAraLeatEyrTyrAra 401 622 CCAGGCTGTGTGACCATCGGAGTACAGCGATATAAACTTTGAGTCCGATCGTATTACCGT 563 422 LeuienAsnAspAsnTlePheHisMetSerLeuLeuLeuAlaCysAlaLeuGluValValMet\_441 442 AlathrTyrSerArqSerThrSerGluAsnLeuAspSerGlyThrAspLeuSerPhePro 461 482 HetysAlaGluJlyAsnLeuThrArgGluMetHetysHisLeuGluArgCysGluHis 501 502 ArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 521 282 PhotographisAsptysthrtogGlnthrAspSortTeAspSorPhoGluthrGlnArg 301 32 ArgThrValMetAshThrIleGlnGlnLeuMetMetIleLeuAshSerAlaSerAspGln 341 462 TentgeArqValLysAnpilestyTyrilePhetysGlutysPheAlatysAlaValGly 381 THEFT THE FILE OF THE PROPERTY OF THE STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD STANDARD S 402 Thr ProArqLysSerAsmLenAspGluGluValAsmValHeProProHisThrProVal Conservative: Mismatches: Matches: indels: Length: 09 026 459A 41 (1 874) x AA76.4411 (1-914) : sdrt) 4.16-173 1056.50 ZUZ TOCAAGGATGGAGAAGGACE 82.14% 21.468 Percent Similarity: Mest Local Similarity: Aliquingal Scores: Svery Mateh: Dis: HASE COUNT Fred No. × ... ×

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Zhote "Jugan, Brain, Vector, pCMVSFoki 6, ist strand cDNA was primed with a NotLoikgo(dT) primer. Five prime end enriched, double stranded cDNA was digested with Not I and cloned into the NotL and Brow RV sites of the pCMVSFeR 5 vector. Library was narmalized. Library was constructed
 by Lite Technologies. Contact: Feag Liang Lite
Technologies, a division of Invitroach 9800 Medical Center
Drive Rockville, Maryland 20850, USA Fax: (1) 801-610
Baryl Email: thanged ifetech.com URL:
 EST 16 FEB 2001
 Eukaryota; Metazoa: Chordata: Cramiata; Vertebra'a; Euteleostomi:
Mammalia: Eutheria: Primates: Catarrhini: Bominidae: Bomo.
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 186 LysThralaValTTeProffeAsnClySerProArqtha ProArqArqtlyClnAshArq 205
 791 AAAACAGCIKITATACCCATTAATGGTTCACCTCGAACACCCAGGCGAGGTCAGAACAGG 732
 206 SerAlaArg11eAlaLysClnLeuGluAsnAsp1hrArg11e11e31nVal1enFystys 225
 226 GluffisGluCysAsmIleAspGluValLysAsmValTyrFheLysAsmPheFfeFroPhe 245
562 LysellyserThrThrArgValAsnSerThrAlaAsnAlaGlutheGluAlaThrSerAla_581
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BP 191-91006 EVRY cedex - France
Email: sequelidenoscope.cus.fr, Web : www.qenoscope.cus.fr.
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Li.M.B., Gruber,C., Jessee,J. and Polayes.D.
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 /tissue_type="neuroblastoma_cells"
/lab_host="DH10B"
 http://fulllength.invillogen.com"
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Mismatches:
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 /clone_lib-"LTI_NFL001_NBC4"
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Matches:
 Indels:
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 /ordanism-"Homo sapiens"
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/clone="cSODD007YA05"
 Location/Qualitiers
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 Homo sapiens
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Clone from S. Wicmann, Molecular Genome Analysis, Octman Cancer Research Center (DKE2), Email s.wiemann?dkfz heidelberg.de; sequenced by BMFZ (Biomedical Research Center at the Charite, Berlin, Chermany) within the cDNA sequencing consortium of the German
 EST 14-AUG-2001
 Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia: Futheria: Primates; Catarrhini, Hominidae; Homo
 No.81 sequence available. This clone (FKFP) already is a vailable at the solution Earlin. Please content the RSPD's Ressourcencentrum, Heubnerweg 6, 14059 Berlin-Charlottenburg, GPPMANY; Emall: clone@fr.pd.de.
 FILETELETELETECACTECTMACALPTWATGGAGGTTCGAGGGTTCAAAFTCTTAAA 552
 245 Argiyriludlu DefyrladiysAsniysAspladspAlaargladiydadAspH15 285
 551 GGATAGGAAGAAATTTTTGTTAAAAATAAAGATCTAGAIGCAAGAITATTTTGGWTCAT 492
 286 Asplys thit cucturitraspser HeaspSerPheGluThrGlnargThrPhoatglys 305
 SerAsmi enAspringluValAsmVallleProProHisThrProValArgThrValMet. 325
 Asulhr (163)s3lni.cuMctMctD3fcaAsaSerAspGhi?rcSerGluAsn 345
 34. LentileserTyrPheAsnAseCys" hrValAsnPretysGluSerfleteutysArgVal 365
 466 1ysAspiloslyTyrilePhsLysGluLysFheAlaLysAlaValGlyGlnGlyCysVal 385
 HILLE
 (86-019)10011901ySerGlnArgTyr1ysLcuGly--ValArgLcuTyrTyrArgValMetGluS 405-
 191 GAAATTGGATCACAGAGATACAAGATGGTTGTTTGGCTTGTATTACCGAGTAATGGAAT 132
 405 erMetLaulysSerGlüGlüGlüArgLeuSerlieGlnAsnPheSerliysLeuLeuAsn- 424
 425 AspAsnilePheHisMet.SerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 444
 ESI (Kochrer,K., Heyer,A., Mewes,H.W., Weil,H. and Wiemann,S.)
Unpublished (1999)
Met Asusertendiyi enVilThrserAnnClyteuProGluValGluAsateuSertys 265
 131 CCATOCTITATICAGAAGAAGGAGGATTATCCATTCAAAATTTTBGCACACTTCTGAATS 72
 PMFSPALAPO92_F1 413 (synopym hloc2) Homo sapiens obNA elege
DMFSpALAPO92 5', mRNA sequence.
 Kochrer, K., Beyer, A., Mewes, W., Weil, B. and Wiemann, S.
 linear
 Am Klopferspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the close insert
 mKNA
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 11 GCAGTAAGT 3
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421 ATACTGAAAAGGTGAAGGATATAAGGATATTTTAAAGAGAATTTGCTAAAGGTGT3 480
 381 Glydlm51yCysValGluIleGlySerGlbArqTyrLysLeuGlyValArqLeuTyrTyr 400
 401 ArgValMet.GluserMetLeuLysserGlu.Glu.Glu.ArgLeu.Serrlle.Glu.Asn.Pheser 420
 541 CGAGTAA1GGAATCCATGCTTAAATCAGAAGAAGGATTATCCATTCAAAATTTTAGC 600
 441 AGAACACGAAAAAAGTAACCTGATGAAGAGGTGAATGTAATTCCTCCACACACCA
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 61 AATITIATACCITITATGAATICICITGGACTIGTAACAICTAATGGACTICCAGAGTI
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 321 ValArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSetAlaSetAsp
 341 SluftoSerSluAsmLeulleSerTjiFtheAsmAshCjsTluValAsmitcLjsSluSer
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This sequence was derived from the FAPESP/LICE Human Canner Genome Project. This entry can be seen in the following URL (http://www.lodwig.org-br/scrip*s/gothtmi2_p*or)-s*2-m72-m19642-210
 Zuote-Porqui: breast; Vector: pucl8; Site_1: Smal; Site_2: Smal; A mini-library was made by cloning products derived from okeSiES PCK (U.S. Letters Patent application No. 196, 716 - Ludwig Institute for Cancer Research) profiles
 Naddi,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,E.F.,
Coldman,G.H., Carvalho,A.F., Matsukuma,A., Rafa,G.S., Simpson,P.H.,
Brunstein,A., debliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,
M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
 into the pur 18 vector. Reverse transcription of tissue maRNA and cDNA amplitication were performed under low stringency conditions."
 Verjovski Almeida, S., Briones, M.E.
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Eukaryota; Metazoa; Chordata; Cianiata; Vertebrata; Euteleostomi;
 Lodwig Institute for Cander Research
Pou Prof. Antonio Prodente 109, 4 andar, 01509-010, Sao Paulo-SP,
 Shotqua sequencing of the human transcriptome with ORF expressed
 676 CACTGOACAGIAT COAAAAAGAAAGITATACTGAGAAAGGAGAAGATATAGGATACATC 618
 557 FACAAAGTEGGAGTTGGTTTGTATTACGGAGTAATGGAATCCATGCTTAAATCAGAAGAA 498
 412 cluarqleuser Hedinasniheserrystenileuasnaspasnileehtemetser 431
 45.2 ASRPYSTBITVALASRPTALYSCHASCELTELCRITYSATAVALLYSASPALECTYTYFILG 373.
 372 PhetysolutysPheAlatysAlaValGlysludlyCysValGlufleGlySerGluArq 391
 617 TITAAAGAGAAATITGGTAGAGGTGTGGGACAGGNITGTGTGGAAATTGGATGAGAGGGA 558
 49. TyrtysfæuglyValArdfæuTyrTyrArqValMetGluSerMetLeuLysSærGluGlu 411
 Mammalla; Eutheria: Primates: Catarrhini; Hominidae; Homo.
 Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491 3496 (2000)
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 200 014 e06&t4~2000-02-21&t4=1)
 1 (bases 1 to 694)
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 /db_xref="taxon:9606"
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 Contact: Simpson A.J.G.
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94.958
 Fel: +55 11 2704922
Fax: +55 11 2707001
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 sequence tags
 Simpson, A.J.
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 20202663

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(bases 1 to 62)

Melton, D., Mentdyws, A., Clitton, S., Hillier, L., Murtdy, M., Pape, D.,
Melton, D., Mentdy, M., China, Schmitt, A., Heisling, H., Ritter
F., Ronko, L., Hentott, J., Cardenas, M., Gilbons, M., McCani, R.,
K., Tsagarcishvill, R., Williams, T., Jackson, Y. and Bowers, Y.
 EST 14 MAR 2002
 DNA sequencing by: Washington University Genome Sequencing Center For Information on obtaining a clone please centact: Juliana Brown
 Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
 This sequence now available from the IMAGE consortium, for clone orders contact: into wimage. Histogov
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 532 LengluserAlacysProtenAsnLen ProtendluAsnAsnHistbrAlaAlaAspMe 551
 452 LeuAspSerGlyThrAspLeuSerPheProTrpTTeLetenAshValLeuAshLeuLysAla 471
 472 Pecaspebety: Igsval Hecluser Phelletysalachud yasni enthratachu 49.
 Contact: Douglas Melton, Klaus II. Kaestner, & Hiroshi Inoue
 432 LeurenAlacysAlaLeuGluValValMetAlaThrTyrSerAruSerThrSerGlnAsn
 492 Met NetysBlatemaluArgéssaluHisArglieMetsluserLeuAlaTipLeuSer
 Mammalia; Eutheria; Primates: Catarrhini; Hominidae; Homo.
 551 tTyrLeuSerProValArgSerProLysLysLysLysGlySerThr1hrArgVal +68
 Libraries were constructed by Dr. Douglas Melton
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 dmeltonabiohp.harvard.edu
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 Seg primer: -40RP from Gibeo
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/note-"Ordan: Pancreas, Vector: pSPORTI; Site_1: Not 1; Site_2: Sal 1; Library constructed using Supersoript Plasmid library kit (life lembelogies) "MAR majr by oligo-df priming. Size-selected by column fractionation;
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 204 rPhenluThrdlaArgThrProArglySSrAsnLeuAspGlyGluValAsnVallloPr 316
 458 aProlysaluSerIleLeuLysAraValLysAspileOlyTyrIlePheLysGluLysFh 376
 476 GATBLYSATBVB1G1yC1yCysVB1G1u11GC1yScrG1nArgryrtys1cuG1yVB 396
 256 ytaurroGtuvalGtuAsnLascattysArgTyrCtuGtufteTyrttautysAsnLysAs 276
 12 t. actfocagaggtfgaaatctftgfaaggafacgagaatffgtafctfaaaaafaaaga. 182
 243 (TIIGAAACACAGAGAAAAAAAAAAAAAAAAAAGTHGAHGAAGAGGAGAAGAGHGAAHGHAAHHGG 302
 416 oProHisThrProValArgThrVaiMetAsnThrHeGlnGlnDeuMetMetHeleuAs 336
 (46, nSerAlaSerAspGlnProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAs 356
 48 * TONTANACTGTGGGGGGGGGTTGTGTGGGAAATITGATGAGGGAIAGAAATITGAGG
 247 ValTyrPheLysAsnPhelleProPheMetAsn-ScrLeuGlyLeuValThrSerAsnGl
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/lab_host="DBHOB"
//clsuc_type="mammary gland"
/lab_host="DBHOB"
//clsuc_vprinker; lst strand cDMA was prepared from mammary gland tissue from a lactating female, and was then primed with a Not I - olique/dTy primer. Double-stranded cDNA was ligated to Ecc Pt adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco Rt sites of the modified pT717 vector. library is normalized. Library modified pT717 vector. library is normalized. Library was constructed by Bento Soares and M. Fatima Hotaldo. "
42 a 1/2 c 204 q 251 & tohers
 Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,I., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M., Steptoe,M., Tan,F., Underwood,K., Moore,H., Thensing,B., Wylle,T., Lennon,G., Soares,B., Wilson,R. and Waterston,R.
 P.A.O.; (1) Mclara, Stordata, Chanlata, Vertebrata, Euteleostomi;
Mammalia: Eutheria; Rodentia; Sciurognathi; Muridae; Musimae; Mus.
 This clone is available royalty from through LLNL; countact the LMACK Consortium (info@image.llnl.qov) for further information.
 744 GCCCAIGCGAAAAICIIGIIGCCICCIIGCAIAIIGICCCGIIAGCICCAAAGAACAATE 685
 684 FOCTAGGAGGE FAAAGGELG CTGCCCACCGTTTAAAAGAGAGGGGTTGTTAAGAGAGGGGTTGTGEG 625
 381 lyGlnGlyCysValGluIleGlySerGlcArqTyrLycLeuGlyValArqCeuTyrTyrA 401
||||||||||||||||||||||
 860 ACTOTAAGGAAAAGAAAGTOTTTGGGAGGGGCCAACGGGTTTACCCCCCACAI - - CCAG 804
 803 TIGG-GCCGTITITGAIACIACICCACCAITAGGGGGGIITIIAATIICCCCAAAIALA 245
 302 ThrProArqLysSerAsn--LeuAspGluGluValAshVallleProProHisThrProV
 321 alArgThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAspw3
 #GI]-LeutysArgVallysAspTleClyTyrIleFbeLysSlaLysFheAlaLycAlaValG
 WashU HHMI Mouse ESI Project
Washington University School of MedicineP
4444 Forest Park Parkway, Hox 8501. St. Louis, Mr 53108
 Conservative:
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 Seq primer: -28ml3 rev2 EI from Amersham
 Matches:
 Unpublished (1996)
Contact: Marra M/Mouse EST Project
 ridels:
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/clone-"1MAGE:1247665"
 Email: mouseest@watson.wustl.edu
 The WashU-HHMI Mouse EST Project
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 High quality sequence stop. 495.
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 Tel: 314 286 1800
Fax: 314 286 1810
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624 GCCAGGCTGTGTTGATAFCSGAGTACAGGAIAIACACTIGGAGTCGGATTGTATTACC 565
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 44) etAlalbriyrSerArqSeribrSerGInAsmLeuAspSerGlyibrAspLeuSerPheP 461
 264 AFGGAATGAFGGATFGGGT FGGATGGGTTTGAGATTGAGGTTATTTGATGTGATTAAGG 205
 521 InSettysAspArdSlutlyProthrAspHisLeuGluSerAlaCysProteuAsnLeuP 541
 941 robeugluAsnAsnAsnHisThrAlaAlaAspMetTyrFeuSerPreWalArgSerProUysL 541
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 481 helleLysAladludlyAsnLenThrArgGluMetHleLysHisLeudluArgCysGluH 501
 501 ISArq11eMet GluSerLeuAlatrpLeuSerAspSerProLeuPheAspLeu11glysG 521
 561 ystysotthrthrarqValAsnSorthrAlaAsnAlaGluthrGluAlaThrSorA 581
 87 AAAGAACTTOCACTACACGTGTAAAITCTGGTGCAAATACAGAGAGAAGAAGCAGCCTCAG 28
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 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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 High quality sequence stop: 633.
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 684 rPhotysArqValLeutletysGluGluGluTyrAspserlletleValPhetyrAsnse 704
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 804 HentysArdSerAlaGluGlySerAsnProProtysProLentysLysLenAraPheAs B24
 5.37 GCTCAAAAGAAGTGCTGAAGGAAGCAA CCTCCTAAAACACTGAAAAAACTACTTTGA 5.95
 824 pileGluGlySerAspClsAlaAsp-GlySerLysHis LeuProGlyGluserLysPho 843
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 1 ATCATCTGGACCCTTTTCCAGCACACCCTGCAGAATGAGGTATGAACTCATGAGACACA, 60
 625 | TellePrinibaria Parisa Britania (1908) | 1908 | 1908 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909 | 1909
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 844 GinGinLysLeuAlaGluMetThrSerThrArqThrArqMetGluLysMetAsu
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 Matches:
 864 AspSerMetAspThrSerAsnLysGluGluLys 874
 716 GGAAGCTGGGTACCTGCATACAGGGAAAGAAAG 748
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Fost processing: Minimum Match 0% Maximum Match 190% Listing first 45 summaries

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om\_estro:\*
om\_hre:\*
ab\_estl:\* 40 est 41\* qb est4:\* qb est5:\* ab hte:\*

Ered. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

em qss\_pro:\*

## STIMMADIFE

|             |   | Description              |             | HM450031 AGENCOURT | BM561083 AGENGOURT | BQ439221 AGENCOURT | BQ220275 AGENCOURT | AKUll246 Mus museu | HM475503 AGENCOURT |
|-------------|---|--------------------------|-------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| COLUMNIA CO |   |                          | 1 1 1 1 1 1 | 1023 13 BM450031   | BM561083           | BQ4 49.221         | BQ220274           | AK011246           | BM475603           |
|             |   | ž                        |             | ~                  | ~<br>-~            | 7                  | 7                  | =                  | <u>-</u>           |
|             |   | Query<br>Match Length DB |             |                    | 104                | E # 5 F 1          | 3.<br>3.<br>3.     | 1 36,4             | 1901               |
|             | * | Overry<br>Matich         |             | 1 4                | 7.7.7              | 3.                 | 4.17               | 24 . H             | 7.17               |
|             |   | Score                    |             |                    | 403                | 85.6               | H44.H              | 824.6              | 786                |
|             |   | Person t<br>No.          |             | _                  | .7                 | -                  | 4                  | J.                 | · '                |

Source

| ALCOZBII DKEZP3130 | No ZEZZZZ AGENCONKI | B45610661 602611848 | ALSte 4757 ALSt. 4757 | RC570456 602591412 | HM466194 ACENCOURT | MM45.47.24 AGENCOURT | B1868359 60339234 | BE5 49278 601063567 | H3646219 602644217 |          | HEURZB46 RC2 Blu64 | AW583181 iallh09.7 | ALS99633 DKFZp313P | B125454 4 602464278 | ALS99105 DRFZp 41 4G | AA76.4411 VW94404.1 | AW46B244 CM4 HIG18 | AA76.4485 vw54hul.r | AWOR2967 Lankeon.y | AL692790 DRFZp 41 41 | ALLICH41 DRFZp762L | RE931236 MRG H1515 | AV215544 AV715544 | ME144857 601790444   | 141151568 60291610B | AA25825 2r59q04.r | 183149059 0088c01.y |          | BETARU95 OV 4 HEATT | M1821116 603035591 | BM456728 AGENCOURT | B1526982 602927177 | RE934784 RC3 HT094 | A1093215 qb04462.x | ALS98766 DKFZp 41.4F | BE865749 601678141 | A16460149 VES4510 V |
|--------------------|---------------------|---------------------|-----------------------|--------------------|--------------------|----------------------|-------------------|---------------------|--------------------|----------|--------------------|--------------------|--------------------|---------------------|----------------------|---------------------|--------------------|---------------------|--------------------|----------------------|--------------------|--------------------|-------------------|----------------------|---------------------|-------------------|---------------------|----------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------------|--------------------|---------------------|
| Al.597811          | 50000000            | BG610661            | ALS6 4757             | HC520456           | BM466194           | HM453724             | B1868459          | BE5 49 278          | BG614219           | HM264009 | H13082846          | AW583181           | AL599633           | BG25.4543           | AL549105             | AA76.4411           | AW 34.8.2.44       | AA76.4485           | AW582967           | AL692790             | AL120941           | HE931236           | AV715533          | 8F111857             | H1151568            | AA258255          | BG149050            | AW502887 | HE168095            | H1821116           | HM456728           | B1525987           | HE914784           | A1094215           | A1.598766            | HE865749           | A1646048            |
|                    |                     |                     |                       | <u></u>            |                    |                      |                   |                     | 24<br>64           |          |                    | 0.                 |                    | :4<br>::1           |                      |                     | 2                  | •                   | C)                 | ۍ                    | -                  |                    |                   | _1                   |                     |                   |                     |          |                     | <u>*</u>           |                    | -                  |                    | v                  |                      |                    | J                   |
| 101                | S88                 | 853                 | 165                   | 71.7               | 472                | 8 37                 | 672               | 747                 | 33                 | 6.18     | 6.54               | ¥ 7 9              | 6()5               | 776                 | 580                  | 9.14                | 388                | H7.1                | æ (                | 5.49                 | . 4<br>            | 6.47               | 144               | 7 44                 | 746                 | 175               | 0<br>₩              | 4.5      | 484                 | 639                | 2083               | 7 34               | 4.47               | 457                | 7 12                 | 603                | C+ 8                |
| 00<br>1 = 1        | F :                 | 21.1                | 21.0                  | a<br>0∂            | 20.8               | 4.07                 | 19.9              | 19.4                | 19.                | 18.6     | υ.<br>20           | 18.5               | 18.2               | 17.9                | 17.5                 | 17. 4               | 17.0               | 16.8                | 16.0               | 15.9                 | 15.9               | 15.6               | 15.4              | 15.4                 | 15.2                | 14.5              | 14.6                | 14.6     | 14.5                | 14.5               | 14.3               | 14.3               | 13.8               | 3.8                | 13.8                 | 13.7               | رم<br>ح             |
| 725.4              | 3.055               | 699.6               | 698.2                 | 692.2              | 8.169              | 678                  | 099               | 643.6               | 6.42.2             | 617      | 6.14               | 605.2              | 605                | 596.4               | 580                  | 5,75,2              | 5,66,4             | 855                 | 230.5              | 5 40                 | 00 7 m             | 516.8              | 513.2             | C1<br>C1<br>C1<br>C1 | 505.2               | 493.8             | 486.4               | 484.4    | 481.4               | 480.2              | 476.6              | 474.4              | 459.2              | 457                | 457                  |                    | C 277               |
| - a:               | ÷.                  | <u></u>             | Ξ                     | _                  | <u>-</u>           | <del></del>          | 15                | 16                  | 1.7                | 9        | <u>\$</u>          | 02                 | 21                 | C4                  | 5.4                  | 24                  | 25                 | 26                  | _1<br>             | 78                   | 25.5               | <del>1</del> 0     | 7                 | <u>€</u>             | ÷                   | 3.4               | 3.5                 | 9        | *7                  | æ                  | 5<br>*             | <b>4</b> 0         | 4.1                | 42                 | 43                   | 4                  | ۷.                  |
|                    |                     |                     | ζ;                    |                    |                    |                      |                   |                     |                    | ٤        | U                  |                    |                    |                     |                      | U                   |                    | Ü                   |                    |                      |                    | U                  |                   |                      |                     |                   |                     |          | Ų                   |                    |                    |                    |                    | Ç                  |                      |                    |                     |

## AL L'INMENTS

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| 1000              |                                                                   |  |
|-------------------|-------------------------------------------------------------------|--|
| MM4.20041         |                                                                   |  |
| LOCUS             | BM450031 1024 bp mkNA linear EST 05 FEB 2002                      |  |
| DEFINITION        | NIH_MGC 72 Homo saprens conA clone                                |  |
|                   | 5', mkNA sequence.                                                |  |
| ACCESSION         | HM450031                                                          |  |
| VERSION           | BM450041.1 GI:18469071                                            |  |
| KEYWORDS          | EST.                                                              |  |
| SOURCE            | human.                                                            |  |
| ORGANISM          | Homo sapiens                                                      |  |
|                   | Eukaryeta, Metazoa, Chordata, Craniata, Vertebrata, Euroleostomi, |  |
|                   | Mammalia, Eutheria, Primates, Catarrhin; Homnistodae, Home.       |  |
| REFERENCE         | 1 (bases 1 to 1023)                                               |  |
| AUTHORS           | NIH-MGC http://mac.nci.nih.gov/.                                  |  |
| TITLE             | National Institutes of Bealth, Mammalian Gene Collection (MGC)    |  |
| JOURNAL.          | Unpublished (1999)                                                |  |
| COMMENT           | Contact: Robert Strausberg, Ph.D.                                 |  |
|                   | Fmail: eqapbs-ramail.nih.qov                                      |  |
|                   | Tissue Produrement: AICC/DVID/DIP                                 |  |
|                   | cDNA Library Preparation: Lite Technologies, Inc.                 |  |
|                   | CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)         |  |
|                   | DNA Sequencing by: Agencourt Broserience Corporation              |  |
|                   | Clone distribution: MGC clone distribution information can be     |  |
|                   | tound through the J.M.A.G.E. Consortium/LLAB at:                  |  |
|                   | http://image.llnl.gov                                             |  |
|                   | Plate, LLAM12264 row, d column 22                                 |  |
|                   | High quality sequence stop: 644.                                  |  |
| FEATURES          | Location/qualitiess                                               |  |
| A CAN CAN CAN CAN | 1 1000                                                            |  |

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Zhata "Ongan skin, Voator pöhv Shokifs, Site_1s Nati;
Site_2s Sali; Cloned unidirectionally. Primer: Oligo dr.
Average insert size 2 kb. Library constructed by Life
Technologies.
 2931 TATAGTATICTATAACTCGGTGTTGTGAGAGAGGAAAAGAATATTTGGAGGAGG 2090
 2091 THOCACCAGGGCCCC FACCHIGHCACCAGAGGCCAATHOCHOGAAGCCTGTGAAGHT 2150
 2151 TCCTAGTTCACCTTACGSALICS GSSASSSANTOTAINTAINTES COSTGAAGADS 2210
 2271 AGTATCAATTGGTGAATAATTPRRRAAMTTGTGAGAAAGTTGGAGAAAATAAATGAGAYGGT 2330
 2391 GAAAAACTAGGCTTTGAATATTGAAGGATCAGATGAAGCAGATGGAAGTAAACATCTCCC 2450
 2451 AGGAGATIOCAAATTICACCACAAACTGGCAGAAATGACTTGTAGTGGAAGAGAAGAATGGATG
 1911 CAAAGDGAAGAATATAGACCTTAAATTCAAAATCATTGTAACAGGATACAAGGATCTTCC 1970
 1971 ICATGCTGTTGAGGAGACATICAAAGGTGTTTTGAI!'AAAGAAGAGGGTGTGTTGT Z030
 2331 ATRITANIAGERECETETETETENAAAAAAGTGETEAAAGAAAGAAACAANIETEETAAAFT 2340
 2691 AAAAIGIGGAGATGCAATTGTIT--GGGTGAIICCIAAGCCACIIGAAAIGIIAGICA1F 2748
 181 LICCACCAGGGCCCTACCTTCTACCAATACCTCACATTCCTCGAAGCCCTTTACAAGTT 240
 360
 421 ATGTAACAGGGACCETGTGCTGAAAAGAAGTGCTGAAAGGAAGTAAGGTGCTGGTAAAGGAGT 480
 661 GGACCTTGGTGGACACTGTGTACACCTCTGGATTGATTGTCTCTGACAALG1GACTGTA 725
 6; Gaps
 DB 13; Length 1023;
 43, Indels
 /clone_lib="NIH_MGC_72"
/lissue_lype="nellandir melandma"
/lab_host="DH108 (phage-resistant)"
 27.4%; Score 910.2; DB 13:
95.2%; Pred. No. 3.2e-165;
Live O, Mismatches 43;
 281 (
/organism "Homo sapiens"
/db_wref-"taxon.9606"
 /elone "IMAGE.5528637"
 1.37 9
 Conservative
 Local Similarity
 114 a
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 Onery Match
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/note="Gradu: eye; Vertor: pNW-SPORIS: Site_1: Not1; Site_2: Sall; Cloned andirectionally. Primer: Cliqs di. Average insert size 1.75 kb. Library constructed by Life Technologies."
 EST 20 FEB 2002
 Exkarycta, Metassa, Chordata, Graslata, Vertekzata, Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini, Hominidae; Homo.
 1969 AAARTIGIGGGGAAGAGGGGGGGGGGAAAITGGALGAGGGGATAGGGAATGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGGGAATTGAATT
 1189 AATTTTAGGAAAGTTGTGAATGAGATTTTTGATATGTGTTTTATTGGGGTGGGTGTT 1248
2749 GTIATITALACAAGATIGAAAATGTTGTGTAAATGCTGCCATTTAAAAAGLIGLAGCAGA 2808
 1129 TTGTATTACCGAGTAATGGAATCCATGCTTAAA1CAGAAGAAGAACGATTATGCAFTCCAF
 Wil Thilling Chining and AAAAATIGETG TGCTTAING CATACAAAATGCCCIA 960
 CONA Library Arrayed by The F M A.S.E. Consortium (LLNL) DNA Sequencing by: Agencourt Blosscheme Corporation Clone distribution: MGC clone distribution information can be found through the L.M A G.E. Consortium/LLNL at:
 1 (bases 1 to 1051)
NIH-MGC http://mgr nci nih gov/.
National Institutes of Health, Manmallan Gene Collection (MGC)
 Sdep : C
 27.4%; Score 909.4; DB 13; Length 1051; 98.4%; Pred. No. 4.6e-165; tide: 0; Mismatches 13, indels 2;
 2809 IIAIII OSDVIOVAANITAAAIISUUSUIIAISAIAGIAAAAAAAS
 4 others
 Email: cqapbs-r@mail.nih.gov
Tissue Procurement: ATC
CDNA Library Preparation: Life Technologies, Inc.
 /cionc_lib="NiH_MGC_67"
/Lissue_type="retinoblastoma"
/lab_host="DH10B (phage-resistant)"
 299 €
 http://imagc.llml.gov
Plate: LLAM12263 row: m column: 18
 /organism-"Homo sapiens"
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 /cloner"IMAGE:5550905"
 /db_xref "taxon:9606"
 Location/Qualifiers
 197 q
 High quality sequence stop:
 PM561083.1 GI:18806043
 221 C
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 .105
 Homo sapiens
 Similarity
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 human.
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BO4 (922)
A)ENEJORI 778,656,2 NIH_M3C_92 HOMO SAPIONS CONA CLONE IMAGE:6015480
 Homo Saprens
Enkuryota, Metassa, Cherdata, Craniala, Verfebrata, Esteleostomi,
 1249 CACCITICIAALCGCCACALALACACAGLACALCHCAGAALCHTGATLCTGGAACAGAT 1308
 1309 TFGFCFTTCCCATGGATFCFGAATGTGCTTAAFTTAAAAGCCTTTGATTTTACAAAGTG 1358
 1369 A INGGAARD FELTA I CAAAGCAGAAGT I IGACAAGAGAAAT GATAAAAA TITITAGAA 1428
 14.29. OGA LOTGAACA COGAA LOSTA GOGLISOCATO OCTOTO AGANTICACOTTI ATTITIGAN. 1488
 489 CITALIAAAGAATCAAAGGACCGAGAAGGACCAACTGATCACCTTGAATCTGCTTGTCCT 1548
 1549 PITAAIMITECTIMERAATAATEAAGIGEAGCAGAATATETAIMITET PETAAGA 1608
 INUY TELEPAAAAAAAAAAGITCAACTAFGGGTGTAAATTETAGTGGAAATGGAGAGAGAA 1668
 1729 AAAAAAGIGIAHOOCIAGOOTIAIGIGGGGCIAAATAOACITIGIGAAOGCITICIGICI 1788
 1289 TAGGACTCAGAATTAGAAAACATATGATGTGGAGGCTTTTGGAGGAGAGGCTGGAGATGAG 1848
 1849 TATGAACTCATGAGAGACAGATTTGGACCAAATTATGATGTGTTCCATGTATGGCATA 1908
 1909-100AAAGTGAAGAATATAGACGTTAA-ATIFAAAATGATTGAAGGAGGAGGATGT-1967
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 661 AAAAAA318FATGGGCTAGCTATCTCCGGCTAAATACACTTTGTGAAGGCCTTCTGTCT 720
481 CITAALCITCCTCTCCAGAATAATCACACAGCAGAATATGTATCTTTCTCCTGTAAGA 540
 National Institutes of Health, Mammalian Gene Collection (MGC)
 Mammalia: Entheria: Primates; Catarrhini; Hominidae; Homo.
 1968 TOTTCATOTICATOAGGAGACATICAAAGGTGT-FTTGATGAAAGAAGAGGG 2019
 Unpublished (1999)
Contact. Robert Strausbeig, Ph.D.
Email: cqapbs-r°mail.nih.qov
 l (bases 1 to 1081)
NIH MGC http://mqc.nci.nih.qov/.
 NQ4 19221.1 GI:21178297
 . mKNA sequence.
 BQ4 19221
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Absolutype minipolar carcinoma, ettl. ihne"
[Abb. host = "BHIOH (phone resistant)"
[Anote = "Ordan : testis, Vertor: pew Sprikls; Site 1: Not1;
Site = "State 1: Cloned unidirectionally; clist off primed.

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full toogth clones and constructed by Lite lechnologies.

Note: this is a NNH_MRP Library."
 2605 CATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACATTTA 2664
 2845 IGGATAGTAAGAAIGGCCCIAGAGIGGGAGICCIGAIAACCCAGGCCIGICTGACIACTI 2904
 2905 TGCCTTCTTTGTAGCATATAGGTGATGTTTGTTTTTTTTATTAATHATATA 2964
 3025 FIFEGATTGACTGCCAFTCACGAAAATTALCCTAAACTCTTCTGCAAAAATGATATAL 4084
 2485 ATGACTTCTACTCGAACACGAALGPAAAAGCAGAAATGAATGATGATGGALGGALAGCTCA 2544
 481 TGCCTTC1F1TG1AGCAIATAGGIGATG111GT1G11G1G1F1TATTAATTTA1ATG1AA
Tissue Procurement: ATCC CDNA Library Preparation: Life Technologies, Drc. cDNA Library Arrayed by the L.M.A.G.E. Consortrum (LANL) DNA Sequencing by Agencent Brosschence Colputation and Clone distribution: MGC clone distribution and because
 4; Gaps
 2545 AACAAGGAAGAAATGAGGATGTGAGGACCTTGGTGGACACTGTGTACAATTT
 2785 IGCCATITAAAAAGTTGIAGCAGATTGITICOTGCCAAAGTAAAATTGCTGGCTTTA
 2725 AAGGCACTTGAAATGTTAGTCATTGTTATTATACAAGATTGAAAATGTTGTAAATGC
 241 ATATCTTCAGCTCTTT11GTGGATATAAAATGTGCAGATGCAATTGTTTGGGTGATTCCT
 25.8%; Score 856; DB 14; Length 1081; 99.1%; Pred. No. 8.7e-155; tive 0; Mismatches 5; Indels 4
 found through the L.M.A.G.E. Consortium/LLNL at http://image.llnl.gov
Plate: LLAMI3211 row: k column: 01
 /ordanism-"Homo sapiens"
 Zelone_lib."NIH_MGC_92"
 High quality sequence stop: 732. Location/Qualifiers
 /db_xref-"taxon:9606"
/clonê-"IMAGE:6015480"
 Best Local Similarity 99,19
Matches 892; Conservative
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AGEN/OURT_7572621 NIH_MGC_92 Home sapiens chun elope IMAGE-6044522
 //ibase_lib-"NiH_MGC_92"
/Lissue_lip-"NiH_MGC_92"
/Lissue_lipe="embryonal carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Gran: lestis: Vector: pCMV SPORT6; Site_1: Not1;
Site_2: Sall; Cloned unidirectionally; oligo-d" primed.
Average insert sice 2.5 Kb. Library enriched for full-length clones and constructed by fife restnering for this is a NH_MGC Library "
Note: this is a NH_MGC Library"
3.85 IAGAAALIAGAAAAAATITACTAATITITACACATPAGATTTTTTTTTTTTTTGTATTGGAATCT 3144
 3204 GATATACHGEGEGEGETETTTATAAAATTTTGCTTTTAATTAAATAAAAGGEGGAAGCAA 3204
 3265 ASTATAACCATATGATACIATGATACTACGAAAGAGAGATTTGATAGCICAGAAIGIAAAA 3264
 4285 GAACTIACIGALTATITICITICALCCAACTTATCITITITAAATGA-GGATTATITGATAGT 3323
 cDNA Library Preparation: Life Technologics, inc. cDNA Library Arrayed by. The L.M.A.G. E. Comportium (ILNL) DNA Sequencing by: Apparocutt Bioscience Comporation Channe distribution, May clone distribution in May clone distribution in the L.M.A.G.E. Consortium/LLNL at:
 661 INGAAATIAG-AAAAAATTACTAATTTTACAATTAGATTTTATTTTACTATTGGAATCT 719
 779 AGTATAACCATAIGATACTATCATACTACTACTACAAACAGATTICATACCICAGAATGIAAAA 838
 455 ITAMACICICACCICCCAIGIIGCICAMAGAACCAIAIAAAAACAGCIGIIAIAACACTA 514
 1 (bases 1 to 881)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Gullection (MGC)
 495 AAATEERAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCTTGACTATTTTA 454
 515 ALGGI IPACCI CGAACACCCAGGGAGG ICAGAACAGGAGTGCAGGGATAGGAAAACAAC 574
 Gaps
 Eukarycia - Metazea, Cherdata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
 25.4%; Score 844.8; DB 14; Length 881;
 8; ..
1.30, 152,
... 7; Indels
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Plate: LLAM13287 row: e_column: 03
High quality sequence stop: 690
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 Contact: Robert Strausberg, Ph.D. Email: cqapbs-r@mail.nih.gov
 Prod. No.
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 Location/Qualifiers
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 HQ220275.1 G1:20401675
 99.0%;
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BQ220275
 Unpublished (1999)
 Conservative
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 Mammalia, Pytheria, Pydestia, Spisregoathi, Matidae, Murindee Mus
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
 Mus masculus 10 days embryo whole body cDNA, RIKEN full-length opriched library, clone 2500017M22 relief13340mma 1, 1ull insert.
 1175 GATTATCCATTCAAAAFTITTAGCAAACTTCTGAATGACAACA-TTTTTCATATGT-0111 1232
 995 GTAGAGTGAAFGTAAAAGAAAGTALAGTGAAAAGAGTGAAGGATATAGGATAGATGTTAL 1054
 1055 AAGAGAAATTTGGTAAAGGTGTGGGGACAGGGTTGTGLCGAAATTGGALGACAGGGATACA 1114
 1115 AACTISSASTICSCIPSTATTASCASTAATSSAALCCATGCTAAAICAGAAGAAGAAC 1174
 935 TRATILIAAA DERRAMARA GARONA GORONA GORONA TORTITICO TATILIAAA DERRAMA GORONA 781 GATIATCCATTCAAAATTTTAGCAAACTTCTGAATGACCACATTTTTTCATATG1CCTTT 840
 241 AGGTGAAAAATGTTTATTTCAAAAATTTTATACCTTITATGAATTCTCTGGACTTGTAA 300
 575 TAGAAAATGATACAAGAATTATTGAAGTTCTCTGTATAAAGAACATGAATGTAATATAGATG 634
 635 AGGTGAAAAATGTTTATTTCAAAAATTTTTATACCTTTTTATGAATTCTCFTGGACTTGTAA 694
 695 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTGTAAAGGATAGGAAGAATTTATGTTA 754
 301 CATCTAATGGACTTCCAGAGGTTGAAAATCTTTCTAAACGATAGGAAGAAILLALGILA 360
 755 AAAATAAAGATCTAGATGCAAGAITATTTTTGGATCATGATAAAACTCTTCAGACTGATT 814
 815 CTATACACACTTTTGAAACACAGAAAACACCAGGAAAAGTAACCTTGATGAAGAGGTGA B74
 875 ATGTAATTTCTTCTACACACTCCAGTTAGGACTGTTATGAACACTATCCAACAATTAATGA 934
 Mus musculus (strain.CSTBL/GS) 10 days ombryo vibha to mRNA,
elone_lib_ETKEN full:length enriched mouse chNA library
 1233 A MIGGOGTGGGGGGTTGAGGTTGTAATGGGGAGATATAGG 1272
 HELLIHITITITE HITTELIHITITITITITITITITE 841 ATTGGCGCGCTCTTTGAGTGTGTAATGGCCACATATAGC 880
 IIIENA
 High-efficiency full-length cDNA cloning
Meth Enzymol. 303, 19-44 (1999)
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 clone:2600017M22.
 AK011246.1 GI:12
HTC: CAP trapper.
 Mus musculus
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 Carminel, P., Shibata, Y., Hayatso, N., Suqahara, Y., Shibata, K., Itoh, M., Komoo, H., ekazaki, Y., Muramalsu, M., and Hayashizaki, Y., Mormalization and subtraction of captrapper selected cDNAs to prepare 1011 length cDNA libraries for rapid discovery of new genes Genome Res. 10 (10), 1617-1640 (2000)
 Marchionni, L., Mashima, J., Mazzarolli, J., Mombarts, P., Nordone, P., Rinq, R., Rinqwald, M., Rodriguez, I., Sakamoto, N., Sasaki, H., Sato, K., Schonbach, C., Seya, T., Shibata, Y., Storch, K.F., Suzuki, H., Tayoroka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wyushaw Boris, A., Yoshida, K., Haseqawa, Y., Kawaji, H., Kohtsuki, S.
 Shibota,K., Itody,M., Aizawa,K., Naproka,S., Sasaki,N., Carninoi, P., Konro, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Iloh, M., Sumi, N., Ishiry, W., Nakamura,S., Harama, M., Nishiro, L., Harada, A., Yamamoto, R., Matsunoto, H., Sakaquchi, S., Ikaaninayi, K., Fojywako, S., Irono, R., Toqawa, Y., Izawa, M., Ohara, E., Watchiki, M., Yomeda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Maisurra, S., Kawai, J., Okawa, Y., Wilan, M., Ohara, E., Watchiki, M., Okazaki, Y., Muramatsu, M., Inone, Y., Kirah, and Bayashizaki, Y. Rikki, M., Interiole September analysis (PISA) system-+64-lormat sequencer former res. 10 (11), 1757-1771 (2000)
 Exploration Research Group, RIKEN Gemömic Sciences Center (GSC), PIKEN Yokohama Institute; i 7 22 Suchito cho, Lautumi ka, Yokohama, Aranarawa 240.0045, Japan (E-mail:genome-resease:iken.go.jp, UKL:http://drenu.go.jp/, for:x1 45:503-9222, Fax:x1:45:503-9216)
 Encyclopedia Project of Genome Exploration Fescarch Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
 Submiffed (10.JUL 2000) Yoshihide Hayashizakı, The Institute of
 Please visit our web site (http://qepome gsc riken go jp/) tor
 Physical and Chemical Research (RIKEN), Laboratory for Genome
 Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-649 (2001)
 CDNA library was prepared and sequenced in Mouse Genome
 5 (bases 1 to 1454)
 Direct Submission
 further details.
 Hayashizaki,Y.
 20499374
 11601507
 21085650
 11042159
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prepared by using trehalose thermo activated reverse transcriptuse and subsequently enriched for full length by cap trapper. Second strand cDNA was prepared with the primer adapter of sequence 15 GAGAGAGAMITETGAGTHAATTAATLAAALCECTCCTCTCC 41, CDNA was cleaved with Xhol and Sstl. Cloning Sites, 5, end: Xhol; 3, end: Sstl.
 /clone_lib="RIKEN full length enriched mouse conA library"
 YETRESPPALLREPYKTAAL PINGSPPELFPROMESAR ANGLENDER LEVICKEHE
CNIDEVKNVYFKNETPETNSLGTVSSNGLPEVESLSKRYEEVYLKNKDLDARLFLDHD
 KTLOTOP IDSPETERT PRKNNPDEEANVV PPHTPVRTVMNT LQQLMV ILINSASDQPSE
Division of Experimental Animal Research in Riken conflibuted to
prepare mouse tissues. First strand cDNA was primed with a primer
[5] GAGAGAGAGAAGCCAAGAGTTTTTTTTTTTTTTTTVR C], cDNA was
 666 CAGTGOGTTATCTAGAAATAAATTCTATGTTGGTGATAAAAATTTCTTGGATATTT 725
 369 TITATTAGGTAAAGGGGAAGTATACAAAGGGAAGATGTCGGGGGGTTTCAGTTCAGTT 428
 69 GIGGGGAATCIGIAICITITATIGCAGGAGITGACCIAGAGAIGICGITCACTITIAC 128
 129 TGAGGTACAGAAAAAGATAGAAATCAGTGTGGTAAATTGTTTAAGTTAGTAAAAAAAT 188
 189 IGATACCAGIACCAAAGIIGAIAATGCIAIGICAAGAAGIGIGAAGAAGIATGAIT 248
 546 CGATACCAGIACCAAGGIIGALAATGCTA FGICAAGACIAI IGAAGAAGIA IAFFF 605
 309 CAGTTCGATATCTACTGAAATAAATTTCTGCTTAAAAATT PCTTGAAATT AAB
 O; Gaps
 486 TGAGCTACAGAAAAGCATAGAAACCAGGTGTCTATAAATTCTTTGACTTATTAAAAAAA
 *Match 24.8%; Score 824.6; DB 11; Longth 1364; Local Similarity 89.1%; Pred. No. 9.5e 149;
 Znote "data source:MGD, source key:MGD197874.
 1 others
 Indels
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 FEB-2003
FM479603
AGEN:OURI_6480307 NIH_MGC_92 Homb sapieus CDNA cloue IMAGE:5575683
 Eukuryola, Metazoa, Chordata, Craniata, Vertebrata, Buteleostoml,
Mammalia, Butheria, Primates, Cataribini, Hominidae, Homo.
1 (bases 1 to 1001)
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 366 TANACAANANANGAGITGAATATAAANTGAAAAATGITTAITTINAAAATTITATON 1025
 1266 TATGAATACTATTCAACAATTAATGGTGATTTTTAAATTCTGCAAGTGATCAGCCATCAGA 1325
 cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by Agence of Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tound through the I.M.A.G.E. Consortium/Li.N. at:
http://mage.lln.gov
Plate: LLAM12326 row: f column: 04
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 969 AAATCTCATTTTCTTATTTTAACAACTGCACAGTGAATCC 1007
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 High quality sequence start: 17
High quality sequence stop: 734.
 NIH-MGC http://mgc nci nih gov/
 Email: cgapbs-ramail.nih.gov
lissue Procurement: AFCC
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/organism-"Homo sapiens"

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/tissue_type="embryonal carcinoma, cell line"
//lab.host."DBIOB (phage=resistant)"
//math.progan: tostis: Vector: pCPW-SPOR16: Site_1: Not1;
Site_2: Sall, Cloned unidirectionally; oligo-dl primed.
Average insert site 2.5 kb. Library enriched for full-length clones and constructed by Life Technologies.
Inll:length clones and constructed by Life Technologies.
Note: this is a NHLMSC Library."
 962 CITCAGAAAACIGAIII -- CETAIIITAACAACIGGACAGIGAAICGAAAAGAAGITI 1019
| 111 | 111 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 | 114 |
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 422 TECASTRARISCIAISISECCIGACIAITIIAIRAACICECCACCECCCAGTECTCA 481
 542 GTOAGAACAGGAGTGCATAGGAAAAQAAGTAGAAAATGATACAAGAATTATTGAAG 601
 403 GTCAGAACAGGAGTGCACGGATAGCAAAACAAGTAGAAAATGATACAAGAATTATTCAAQ 462
 902 GGACHCHTAIGAACACTATCCAACAATTAATGATTTTTAAATTCAGGAAGTGATGAAC 961
 602 ITCTCTGTAAAGAACALGAALGTAATATATAGATGAGGTGAAAAATGTTTATTTCAAAAAT 661
 523 TIAIAGTIIIAIGAAIICTGIIGGAGTIGIAAGAGGAGIIGGAGIIGGAGATGAAA 582
 583 APCHIPPOTABAAGGAPAACAAGAAPPTPATPTPAAAAFAAAAGAPGTAGAPGCAGATTA! 642
 782 ITTIGGAICAIGAIAAAACICIICAGACIGAIICIAIAGACAGIIITGAAAACACAGAA 841
 842 PAPPAPPAAAAAAAQTAAQQTTGATGAAGAGGTGAATGTAATTCCTCCACACACTCCAGTTA 901
 662 TTATAGGTTTTTATGAATTGTGTTGGAGTTGTAAGATGIAAIGGAGTTGGA3AGGTTGAAA 721
 802 AAGGCAGCAGTTGGATALGIAGIGAAATAAATIGIGGATTGGTGAAAAGIITGIIGGA
 342 FGACATTTTATTAGGTAAAGGGGAAGTALTACAAATGGAAGATGATGTGGLGALLLGAL
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Site_1: Posky (destroyed): Site_2: Net; kNA source post of three evaries, from foundles langing in age from 38 to 49 yo. Library is objected primed and directionally cloned (Ecoky site is destroyed upon cloning). Average insert size range 1:3.5 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code (36.
 Throat HST 20 FTB 2002
 AGENCOURT 6705183 NIH_MGC_125 Homo sapiens cONA clone 1MAGE:5588245-57, mRNA sequence.
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutaleostomi,
Mammalia: Eutheria: Primates: Catarrhini: Hominidae; Homo.
 2290 TPOSGACITCTGAGAAGITCCAGAAAAIAAAIGAGATGGATAIGIAAGAGGGAGGGIGIG 2349
 2350 CTCAAAAGAAGIGCIGAAGGAAGCAACCCIGCIAAACCACIGAAAAAGIAGGCTTTGAT 2409
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 460 ATTGAAGGATCAGATGAAGCAGGAAGTAAAAGATGGGGAGGAGGAAATTTGAG 419
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 800 CTCAAAAAAAAGTGGTGAAGGAAGCAACCCTCCTAAAACGAACTACGCTTTGAT 359
 NIH MGC bitp://mgc.mci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MSC)
 6; Caps
 cDNA Library Preparation: Lite Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) BNA Sequencing by: Agencourt Bioscience Corporation
 22.6%; Score 252.4; EB 13; Length 1122;
99.6%; Pred. No. 7.7e-135;
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1020 ACTGAAAAGAGTGAAGGATATAGGATACATCTITAA 1055
 BB & TATAGEGAAAAGAAGAGTAAGAATAA 918
 159 t
 Plate: ILAMI2359 row: a column: 14
 0; Mismatches
 Contact: Robert Strausberg, Ph.D. Email: cqapbs-ramail.nih.qov
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EST (Poustka,A., Wellenreuther,E., Mewes,B.W., Weil,E. and Wiemann
 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi:
Mammalia, Eutheria, Primates, Catarrhini, Hominidae: Homo.
 Heidelberg/Germany) within the cONA sequencing consortium of the
 This is the 5' separate of the clone insert close from 8. Wiemann, Wolfecular Genome Analysis, German Cancer Persarch Center (PKZ): Fmails s.wiemann eMt., heidelberg.de; sequenced by DKFZ (German Cancer Research Center,
 2270 AICHGIGIAIAAARAGISAGAITIAAAAAGIRHAAGAALAGIGGILAGA 2419 CAAAAGIAA 2829 HHHHHHHHHHHHHHHHHHHHHHHHHHHH
 2830 AATTICCTCTTTTATCCATACTAACAATCCCCCTAGACTCGGGGGTTTTTGATAACTCAGG 2889
 3067 TGCAAAAAT -GGATATTATTAGAAAATTAGAAAAAATTACTAALITTIACACATTAGATTT 3125
 2644
 2710 GTTTGGGTGATTCCTAAGCCACTTGAAATGTTAGTCATTGTTALTTATACAAGTTGAAA 2769
 2890 CCTGTCTGACTACTTTGCCTTCTTTTGTAGGAIALAGGGAIGLIGTTGCTCTGGACTTAL 2949
 2950 TAATITATA-TGTATATITITITAATITAAGATGAA-GAGCCTTAGAAAATGTGTCCTA +006
 3007 TCTAICTTCCAAAIGCAAITTGAFFGAGIGCCAIFCACCAAAAIIAFCFFGAAATFFF 3066
 2650 TTATGGCCACATTAATATCTTAGCTCTTTLTGGCAFATAAAATGGCAGAGAGGT 2709
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 600 ITALGGCCAGATITAAFATCTICAGGTCTTTFGGGATATAAAATGTGCAGAFGCAATT 659
 480 AGCATGGATAC/TCAAA/AAGGAAGAAATGAGGATCTCAGGAC/TTGGTGGACACTGT 519
 727 bp mkNA linear EST 14-AUG DKFZp31300816_r1 313 (synonym: hlec2) Homo sapiens cDNA clone ALS97811
 2590 GTACACCTCTGGATTCATTGTCTCTCACAGATGTGACTGTATAACTTTCCCAA33TTCTGT
Max-Planck-Institute for Molecular Genetics
Ibnestrasse 74, 14195 Berlin, Germany
Tel: 49-30-84131623
 Email: poustkaampimg-borlin dahlom.mpq.do
 3126 IATITIACTATIGGAAICTGATATA 3150
 ALS97811.1 GI:15160502
 Contact: Pousika A.J.
Department Lehrach
 Fax: +49-30 84131128
 Unpublished (1999)
 Homo sapiens
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This clone (DKEYER) 200816 is available at the BZED in Berlin.
Picase contert the Perry. Ecssourecerentias, Heubnerweg 6, 14059
Berlin-Charlottenburg, GERMANY: Fmail: clone#rrpd de.
 1701 GAAATCTAGGTGTCTTTGACTGTTTTATAAAAAGRGTATGGGCTAGGCTTATCTGGCTT 1750
 1821 CCTITICCARCACACCCIRCAGAATRAGIAAAQICAIGAGAGAGAGAGAGAGAGAGACATTIGGACCA 1880
 HB1 AATFAFGAFGFGTFCCATGTATGGCATATGCAAAGTGAAGAATATAGACCTTAAAFTCAA 1940
 2361 TGCTGAAGGAAGCAACCTCCTAAAACACTGAAAAAACTAGGCTTGAATATTGAAGGATC 2420
 212) ACCIGACAFICCICGAAGUUUTTACAAGTTTTOTIAGTIGAGGGTTAGGGATTGGTGGAGG 2180
 2181 GAACATOTATATITCACCCTGAAGAGTOCATATAAAATTTCAGAAGGTOTGOCAACAAC 2240
 224] AAFAAAAFGACTCCAAGACCACAAGAAGCTTAGTATGAATTGGTGGATCATTCGGGACTTC 2300
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 FUL TOAGAAGITCCAGAAAATAAATCAGATGGTATGTAACAGCGACCGTGTGCTCAAAAGAAG 660
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 b. 21.8%; Score 725.4; DB 9. Length 727,
Similarity 99 9%; Prod No. 1 3α-129;
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ARENYOTEL_7565045 NIH_MGC_92 Home sapiens CDNA clone HMAGE:6041563
 Fekarycia, Motarga, Chardata, Grapiata, Vertebrata, Estelessiomi,
Mammalia, Eutheriu, Frimates, Cataribini, Hominidae, Homo.
 CDNA Library Preparation: Life Technologies, inc. CNNA Library Arrayed by: The T M A G E Consortium (LLNL.) DNA Sequencing by: Agencourt Biosrience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 1 (bases 1 to 880)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGP)
 244 GIAITGITGA NIGHTER AGAAA GAAAA GAAAA GAAAA GAAAA AAAAAAA 303 HIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
 544 CAGAACAGGAGTGCACGGATAGCAAAACAACTAGAAATGATACAAGAATTATTGAAGTT 603
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 Ä
 21.7%; Score 720.6; DH 14: Length 880: 98.7%; Pred. Nc. 1c 128;
Live 0: Mismatches 9; Indels 1;
 Contact, Robert Strausberg, Ph.D. Email: cgapbs-rämail.nih.gov
Tissue Procurement, ALCC
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Location/Qualifiers
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 BQ22227.1 G1:20403627
 Unpublished (1999)
 Ouery Match
Host (ocal Similarity 98.77
Matches 737; Conservative
 , mRNA sequence.
 .880
 Homo sapiens
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 human.
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linear EST 18-APR-2001
 Anoter Tordan: prostate; Vector: phwk LiH (Clontech); Site I: Shil (quecuectequee); Ene_2: shil (quecutalidique); Doubie stranded cDNA was prepared from cell line RNA. 5° and 4° adaptors were used in cloning as follows: 5°
 adaptor sequence: 5' randodra Falchord (30) and 3' adaptor sequence: 5' AllCladaOGCGAOGCGCACAGG (30) NN 3' (Where N A, C, or G and N A, C, C, or T). Average insert size 1.5 kb (range 0.9 4.0 kb): 14/15 colonies contained inserts by PCR. This library was enriched for
 Homo sapiens
Enkaryota: Metazoa: Chordata: Craniata; Vertebrata: Eutelcostomi;
Mammalla: Entheria: Primates: Catarrhini; Hominidae; Homo.
 602611848F1 NIH_MCT_60 Homo Sapiens CONA close 1MAGR.4737634 51,
 DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be cound through the L.M.A.G.E. Consortium/LLML at:
604 STCTGTAAA/SAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAAAATTTT 663
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 481 PELICERAAPGATACGAAGAAATITALCTIAAAAAFAAAGATGTAGATGCAAGATTALFF 540
 784 ITHGATCATGATAAAACTCITCAGATGATGTATAGAGAGTTTTGAAACAGAGAGA 843
 844 PYAPIJAAAAAGIAAPPILIJAIGAAGAGGIGAAIGIAAFITPCIICCACACACIICGGGGIFAGG 1903
 904 ACTOTALGAACACTALCAACAALTAALGALGALTILAAALTGAGGAGGALGALGAA-CC 952
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 National Institutes of Health, Mammalian Gene Collection (MGC)
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 Tissue Produrement: DCID/DIP
 Location/Qualitiers
 RG610661.1 GI:14662032
 http://image.llnl.gov
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LOCUS AL563757 A.T.L_MFLOO!_NEC4_HOMO_SUPICES CONA_CLODE TSULDED FOR ZOO!
 2451 AGGAGAGTPCAAATTTCAGCAGAAAPTGGCAGAAATGACTTGTACTFGAACACAATGCA 2510
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1 = 1
 2941 ENTISCETTOITIANAALIAARSIANAARITTIITIAATIAAAAAAAAT 2940
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 ÷ () ()
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 full length clones and was constructed by clontech
Laboratories (Palo Alto, CA). Note: this is a NHLMGC
Library."
 9; Caps
 1 AGGAGAGTCCAAATTTCAGCAGAAACTGGCAGAATGACTTCTACTCGAACACAATGA 60
 2751 TATITATAGANGATIGAAAAATGIIGIGIAAAATGIIGAGAATIIAAAAAAGIIGAGA AGATI
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 DR 12; Length 823;
 34; Indeds
 3228 TACTACTCAAACAGALTTCATACCTCAGAATGTAAAAGAACT 3269
 777 TACTATTGAA--CAGATTCATACCTCAGAATGTAAAGAACTF 816
 Score 699.6; DB 12
Pred. No. 1.2e 124;
 1 1 7 7
 0; Mismatches
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 21.1%;
94.8%;
 prime, mRNA sequence.
 Matches 779; Conservative
 Query Match
Best Local Similarity
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enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pcMVSPORT 6 vector. Library was normalized. Library was constructed
 by Lite Technologies. Contact: Feng Liang Life
icchnologies, a division of Invitrogen 9800 Medical Center
Drive bockwille. Maryland Zewich. 95A. Exx. (1) 401 Fin
8371 Email: filangalifetech.com URL.:
 Analog Strand and Norther PONSPORT 6: 1st Strand alma was primed with a Notl-Oligo(dT) primer. Five prime end
 Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi:
 13.2 ICTGATTICCTATTTTAACAACTGCACAGTGAATCCAAAAGAAAGTATACTGAAAAGAGT 1031
 ·)2 AGAACALGAAIGTAAIA1AGALGAGGIGAAAARGTITATTTCAAAAATTITAFACCITT 671
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 47.2. GGACAYTWICCAACAAIIAAIGAIGIIIIIIAAAIICAGCAAGIGIICAACCITCAGAAAI 313
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 3, Gaps
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Location/Qualifiers
 Mammalia: Puthoria, Urimatos, Catarrhini, Hemiridae, Home.
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 23, Indels
 26 others
 Full-length cDNA libraries and normalization
 Jessee, J. and Polayes.D.
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 http://tulllenath_invitrogen_com"
148 c = 117 q = 255 t
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/db vrof="tavon-9606"
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BP 191 91006 EVRY cedex - France
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by Lite Technologies.
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Mammalia; Eutheria; Primates, Catarrhini; Hominidae; Homo.
1 (bases 1 to 767)
 BG570456
6U2591312P1 NIH_MGC_77 Homo sapiens cOna clone IMAGE:4717874 5'.
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 1032 3AAA3GATATAA3ATACATCTTTAAAGAGAATITGCTAAAGCIGIGIGIGIGIGI 1892
 252 GAAGGATWIKGGATACWIYITTAAAGAGAAATTIGCTAAAGCTGTGGGACAGGGTTGTGT 194
 192 CGAAATTGGATCAGAGGATAGAAG11GG11G111GGC11GTA1IAGCGAGTAATGGAA 133
 Contact. Robert Strausberg, Ph.D.
Bmail. Person Thanlin th.gov
Lisaue Encourament. CLONTEGH Laboratories, Inc.
cDNA Library Preparation: CLONTEGH Laboratories, Inc.
cDNA Library Preparation: CLONTEGH Laboratories, Inc.
DNA Sequencing by: Ineyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
 NIH'MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammaiian Gene Collection (MGC) National Institutes
 4: Gaps
1210 GACAA CATITIICATAIGICITIAIIGGGIGCGCICIIGAGGIIGIAAI 1259
 20:8%; Score 602.2; BB 12; Longth 767;
97:1%; Fred. Mc. 8.16:123;
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 BG570456
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Mammalla: Eutherla: Primates; Cafarrhini; Hominidae; Homo.
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 0070 AAAAALGGALATIALIAGAAAJIAGAAAAAFIACIAATTTIACACATIAGATTTTATT 3129
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 361 CTGFCTGACTTGCTTTGCTTTGTAGCATATAGGTGATGTTTGCTTGTTTTATT 420
 421 AALUALAIGIALAITIIIIIAAITIAACAIGAACACCCIIAGAAAIGIGGCTATCTA 480
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National Institutes of Health, Mammallan Gene Collection (MGC)
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 Contact: Robert Stransberg, Ph.D.
Email: eqapbs rémail.nih.gov
Lissue Procurement: ALCC
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Clone distribution: MSC clone distribution intormation can befound through the L.M.A.G.E. Consortium/LLML at: http://mage.lln.gov

 6. Gaps

 2647 TGTTTATGSCAAATTTAATATCTCAGGGTTTTTGTGGATATAAAATGTGGAATGCA
 2887 AGGCCTGTCTGACTACTTTGCCTTCTTTTGTAGCATATAGGTGATGTTTGCTGTTTT
 20.8%; Score 691.8; DH 14; Lingth 972;
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Mammalia: Eutheria: Primates; Catarrhini; Hominidae: Homo.
 Library constructed by Life
 1428 ACGATGTGAACATCGAATGATGATGGAATCCCTTGCATGGCTCTCAGATTCACTTTATTTGA 1487
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 1228 TAAAAAAGIGTATOGGCTAGGCTATGTGGGCTAAAFAGGGGTTTTGTGAAGGGGGTTGTGTG 1787
 cand library Preparation, Life Technologies, Inc. CNM Library Arrayed by: The LMAG.E. Consortium (LLNL) DNA Sequencing by: Apencourt Bioscience Corporation Clone distribution. MSC clone distribution indicemation can be tound through the L.M.A.G.E. Consortium/LLNL at:
 7.4. TOTTATTAAACAATCAAAGGAACGAGAAGGAACTGATGACO115AATGTGGT15102. 132
 RHFWTT has consistent and the collection (MGC) National Institutes of Health, Mammalian Gene Collection (MGC)
 Cales
 20.4%; Score 678; DB 13; Length 835; 100.0%; Pred. No. 1.7e-120;
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Manmualia, Eutheria, Finates, Catarthini, Healindae, Homo.

I thases I to 67.

National Institutes of Health, Mammalian Gene Collection (MG7)

Oupublished (1999)

Contact: Robert Strausberg, Ph.D.

Email. caqubs-Framillain, qoy

Tissue Procurement: ATCC
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/tissue_type="adenocarcinoma, cell line"
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Average insert size 1.7 kb. Library enriched for full-rengt: clones and constructed by Life Technologies.
Note: this is a NH_MGC Library."
 1968 TCCTCATGCTGTTCAGGAGACATTCAAAGGTGTTTTGATCAAAGAAGAGGGGGTATGATTC 2027
 1848 GTATGAACTCATGAGAGAGAGACTTTGGAGGAALTATGATGTGTGTGTATGTATGCAL 1907
 1908 ATGCAAAGTGAAGAATATAGACCITAAAITCAAAATCATTGIAACAGCATACAAGGAIT 1957
 1018 TALLALANIALINISTANAGUGGSTGTTTANGCAGAGGAAAAGAAANATTTTGGAGTA 2087
 1788 IGAGCACCCAGAATTAGAACAIAICAICIGGACCCIIIIICCAGCACACCCIGCAGAAIGA 1847
 433 GIALGAA: L'ALGAGAGA AGGATITGGACTAAAITAEGAIGIGITGCATGTATGCAT 492
 493 AUGCAAAGTGAAGAATATAGAGCTTTAAATTGAAAATGGTAGAAGGATAGAAGGATCT 552
 cDNA Library Preparation: Lile Technologies, inc. cDNA Library Arrayed by: the 'LM-AC.B. consortium (LLNL) And Sequencing by: Incyte Genomics, inc. Claus distribution. MGC clone distribution information can be found through the LM-A-G.E. Consortium/LLNL at: Plate: LLAM12026 row: k column: 07
313 TAAAAAAGTGTATCGGCTAGCCTATCTCCGGCTAAATACACTTTGGAACGCCTTCTGTG 372
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 673 1GC11CCACCAGGCCCCC 690
 Similarity 99.9%;
 Matches 671; Conservative
 . . 672
 mRNA sequence.
 Homo sapiens
 B:868359
 BI868359
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 BASE COUNT
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| 2.009<br>2.009<br>2.209<br>2.429<br>2.489<br>301<br>2.009<br>4.21<br>2.009<br>4.21<br>2.009<br>3.41<br>2.009<br>3.41<br>2.009<br>3.41<br>2.009<br>3.41<br>3.41<br>3.61<br>3.61<br>3.61<br>3.61<br>3.61<br>3.61<br>3.61<br>3.6 | PARTECIANTELLE INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA INTELLA | 2308 |
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| 2.46.9<br>2.46.9<br>2.42.9<br>2.44.9<br>40.1<br>2.54.9<br>46.1<br>2.56.9<br>48.1<br>2.72.9<br>5.41.9<br>2.72.9<br>5.41.1<br>2.72.9<br>5.41.1<br>2.72.9<br>5.41.1<br>6.01.1                                                    | COAACA LOAGAA LOTTAGTA LOATTGGTGAA LOATTGGGGACTTGTGAGAAGT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 120  |
| 2.56.9<br>1811<br>24.29<br>24.13<br>2.14.09<br>46.11<br>2.16.09<br>4.21<br>2.16.09<br>3.41<br>2.12.9<br>5.41<br>2.12.9                                                                                                        | PPONGAAAA FAAA TOO GAA GAAA GAAA GAAAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2368 |
| 2.86.9<br>2.48.2<br>2.48.9<br>5.01<br>2.5.47.9<br>4.2.1<br>2.66.9<br>4.2.1<br>2.7.2.9<br>5.4.1<br>5.4.1<br>5.4.1<br>6.0.1                                                                                                     | TOTAGAAAATAAATITAGATGGTATGTAAAAGGGGGGGGGG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 180  |
| 24.29<br>24.89<br>24.89<br>50.1<br>25.47<br>42.1<br>26.69<br>42.1<br>27.29<br>54.1<br>27.29<br>54.1<br>54.1<br>54.1                                                                                                           | GANGRARIN TEN TANAR AND GANARAR LANGE TINGALA LINGAGAL CAGATGANG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2428 |
| 2429<br>2489<br>001<br>25439<br>461<br>2669<br>481<br>2729<br>541<br>2748                                                                                                                                                     | GAAGCAACCT TAAACCACTGAAAAAAACTAGGTTTGATTTGA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 240  |
| 2489<br>801<br>2540<br>421<br>2660<br>481<br>2729<br>541<br>2748                                                                                                                                                              | CCAACTTAAACATCTCCCAGGAGAGTCCCAAATTTCAGGAGAAATTGA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2488 |
| 2489<br>501<br>25049<br>421<br>2669<br>481<br>2729<br>541<br>2788                                                                                                                                                             | CAMA LOGARO LA ARRAGA DE CONTROL EN LA CAGAGACA LOGA DA GAGA ANTO CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONTROL CONT | 300  |
| 25.479<br>45.1<br>256.9<br>42.1<br>27.29<br>54.1<br>27.29<br>54.1<br>60.1                                                                                                                                                     | OTTOTACIOGRAFICARANCE ANAROTANARA IGRATIGALIA CALLO ALACTONARA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2548 |
| 2540<br>461<br>26609<br>421<br>2660<br>481<br>2729<br>541<br>2788                                                                                                                                                             | CTTCLATICATA ACTAALOTAAAACCA TAAAA IGA LOTACA LOTA ACTAACA CAA ACTAACA CAA ACTAACA CAA ACTAACA CAA ACTAACA CAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 360  |
| 96.1<br>26.09<br>42.1<br>26.69<br>48.1<br>27.29<br>54.1<br>27.88                                                                                                                                                              | WAGAAATGAGGATGTCAGGACGTTGGGGACACTGTGTACACTTGTGGATTCATT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2608 |
| 26.09<br>421<br>2669<br>481<br>2729<br>541<br>2788<br>601                                                                                                                                                                     | AGGAGAGAGAATGAGGATGTCAGGAGGTTGGTGGGGGGGG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.20 |
| 421<br>2669<br>481<br>2729<br>541<br>2788<br>601                                                                                                                                                                              | GIPTOLOGYAGA IGIGACIGIA I AACTI I COCAGGII ICI GITTA I GGORACA FITAATAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2668 |
| 2669<br>481<br>2729<br>541<br>2788<br>601                                                                                                                                                                                     | POR AGAIGEGACHOLLE HELLE FOR CAGGEROLLE THE FILL MALTALE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 480  |
| 481<br>2729<br>541<br>2788<br>501                                                                                                                                                                                             | - TTCAGCTCTTTTGTGGGATATAAAATGTGCAGATGCTATGGGTGGTTGCTAAGC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2728 |
| 2729<br>541<br>2788<br>601                                                                                                                                                                                                    | CTTCAGCTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 540  |
| 541<br>2788<br>601                                                                                                                                                                                                            | CANTIGAAATGITAGICALIGITATLIATACAAGAITGAA AAWMITGIGIAAATGCTGC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2787 |
| 2788<br>601                                                                                                                                                                                                                   | CACTGAAATGITAGICAITGITAITAIACAAAAAAAAAAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 600  |
| <b>6</b> .0                                                                                                                                                                                                                   | CALITAAAAAGI LOTAGCAGALIGI LICCICI ICCAAAGI AAAALIG I GOOGII TITALGG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2847 |
|                                                                                                                                                                                                                               | CALLIAAAAAGITGTAGTAGTIGTTGCTGTTGTTTTTTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 669  |
| UF ZB48 ATACITA                                                                                                                                                                                                               | ATMITAAGAATG 2859                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |
| pb to tolara                                                                                                                                                                                                                  | ALANIAANAALI 672                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |

Search completed; January 18, 2003, 04:07:25 leb time: 2039,95 sees

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| _        | 1558   | 45.6        | 1364            | Ξ        |                                         | AK011246 Mus muscu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ~        | 1551   | 45.5        | 1051            | 3        | BMS61084                                | PM56108 AGENCOURI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ~        | 1448   | 1.5.1       | 883             | 1.4      | RQ220225                                | HJZ20275 AGENCOUR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4        | 1339   | 40.6        | 1001            | 13       | HM475603                                | HM475603 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4        | 1.254  |             | 1.5             | 5        | A1.597813                               | A1.537811 DKFEp3130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| φ        | 1246.5 | ଟ.<br>ଅଧ    | 088             | 14       | BQDSSDSS                                | BQ22227 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ۲-       | 1208   |             | 8.45            | 13       | BM453724                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| œ        | 1111   |             | 1023            | 13       | BM4 500 41                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|          | 1056.5 | e . Fe      | £ : 6           | ÷        | AA76 1411                               | ->                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 01 3     | 1043   |             | 26.6            | 5        | AL564757                                | AL56 175                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| [        | 1037   | 23.7        | 605             | 5        | A1.599633                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| 14       | 1018   | 0.00        | , t             | i o      | AA763485                                | ;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1 -      | 100T   | 4 C         | 100             | , ,      | 7 1 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 | 1.1011#5WV 10#101/AX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|          | 000    |             | 10              | 1 0      |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|          | 796    | 77.0        | 9\$ /           |          | BILLSTREE                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ε<br>Τ   | 959    | 21.9        | 294             | 0        | AV715544                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <u>∵</u> |        |             | 48€             | _*       | BG149050                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 50       | 94     | 21.7        | 734             | _4<br>_4 | BF144857                                | BF144857 60179044                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <u>.</u> |        | 21.4        | 5 19            | 5        | A1.692790                               | AL692290 DKF2p3131                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 급        |        |             | 68,6            | 0:       | 85539278                                | BES 33278 601063567                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Ç1       | 88     | 0.00        | 5.5             | 5        | A::120941                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4.       | 8.7    |             | 7 14            |          | BI526982                                | 81274709 78607118I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 25       | 869.5  | 19.9        | 623             | 7        | BG244088                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|          |        | -           | r:<br>J         | -1       | 15日 ラステム さた                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| c 27     |        | 13          | 484             | 10       | BE168095                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 28       | 833.5  | 19.         | 646             | 13       | HM4 90416                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| S        |        | 18          | 493             | 0        | AW502887                                | ~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Ö٤       | 8      | 8<br>7      | C4<br>C4<br>W1  | 6        | AA072780                                | Ε                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3.1      |        | . 38        | 832             | თ        | A1646038                                | A1646038 VW54a10.x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ۳.<br>د  |        | L+          | 2083            | 13       | BM456728                                | EM456728 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 33       |        | 17.         | 453             | 10       | AW503514                                | AW503514 UL-RF-BN0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|          |        | 16.0        | 462             | 5        | A1606529                                | A1606529 vb27408, v                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| c 35     |        | 15.6        | 4 +8            | 12       | HF827047                                | BF827047 RC3 HN00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 36       | 68     | 15.6        | 749             | 14       | C82304                                  | CB2304 CB2304 Leuk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 37       | 667.5  | 15.3        | 709             | 5        | A1646097                                | A1646097 VW54h07.x                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 38       | 199    |             | 651             | 13       | B1696841                                | 603344                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 39       | 629    |             | 380             | 10       | AW951604                                | AW951604 EST463674                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|          | 633    | 14.5        | 425             | 0.       | BE285796                                | BE285796 601096510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4 ]      | 04     |             | 67.2            | *        | H1868359                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4        | 979    | 14.3        | - t             | 04<br>## | BF466536                                | BE466536 UI-M CGOO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| c 43     | 625.5  | 14.3        | $\sim$          | 1.5      | BF998390                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4        | 6      |             | 415             | ÷        | A1745644                                | ***                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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AK011246 1864 bp mkNA linear HTC 19.JAN-2002 Mus musculus 10 days embryo whole body cDNA, KIKEN full-length enriched library, close:2503017M22:relindblastoma 1, full insert Mus musculus (strain:C57HL/6J) 10 days embryo cDNA to mkNA, clone\_lib.RIKEN tull-length euriched mouse cDNA library clone:2600017M22. ALIGNMENTS Sequence. AKO11246 AKO11246.1 G1:12847243 HTC: CAP trapper.

> DEFINITION RESULT 1 AKU11246

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ACCESSION VERSION KEYWORDS SOURCE

Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus. Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi, Mus musculus

ORGANISM

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Kawai,J., Shinaqawa,A., Shibata,K., Yoshino,M., Itoh,M., Ishii,Y.,
Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Arakawa,T., Hara,A., Fukunishi,Y., Konno,H., Adachi,J., Fukuda,S.,
Alzawa,M., Isawa,M., Nishi,K., Kiyosawa,H., Kondo,S., Yamanaka,J.,
Saito,F., Okachin,T., Saito,P.,
Kadota,K., Matsudo,H., Ashburner,M., Batalov,S., Casavant,T.,
Fleischman,M., Gasterland,T., Gissi,C., King,B., Kochiwa,H.,
Kuehl,P., Lewis,S., Matsuc,Y., Nikaido,I., Fucuki,R., Tomita,M.,
Wagner,L., Washio,T., Sakai,K., Okido,T., Furuno,M., Aono,H.,
Haldarolli,R., Barshio,T., Sakai,K., Okido,I., Futuchi,C.,
Fletcher,C., Fujila,M., Gariboldi,M., Gustincich,S., Hill,D.,
Holmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Marchionni,L., Mashima,J., Marzarolli,J., Mombactts,F., Nordonc,P.,
King,H., Khiqwald,M., Rodriquez, I., Sakamoto,N., Sasaki,H.,
Sato, K., Schonbach,C., Seya at Shibata,W., Estorch, K.E., Suruki,H.,
Wynshaw Boris,A., Yoshida,K., Haseqawa,Y., Kawaji,H., Kohtsuki,S.
Hunctional annotation of a full-tength mouse cDNA collection
Naturo 409 (6821), 685-690 (2001)
 Adachi T. Airawa F. Akahira S. Akimura T. Aogo U. Arai,A Arakwaza, L. Baidarelli, Bonoli, H. Browistein, Bull,C., Carninci, P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanagaki,T., Hara,A., Hayatsu,N., Hill,D., Hiramoto,K., Hiraoka,T., Hori,F., Hume,D., Imolani,F., Ishi,Y., Ilod,M., Icawa,M., Kasukawa,T., Kaloni, E., Kouda,M., Koya,S., Kurinara,C., Matsuyama,T., Miyazaki,A., Miki, K., Nomura,R., Numazaki,P., Ohno,M., Okazaki,A., Nichi, K., Sano,H., Saito,H., Saito,H., Shibata,Y., Shibata,X., Shiba
 Carmingi,P., Shibata,Y., Hayatsu,N., Sugahara,Y., Shibata,K., Itoh,M., Konno,H., Okazaki,Y., Muramaisu,M. and Hayashizaki,Y. Nurmailatation and subtraction of cap-trapper-selected cDNAs to prepare tull-length cDNA libraries for rapid discovery of new genes common Pos. 10 (10) 1417-1430 (2000)
 Yamamoto, R., Matsumoto, H., Sakaguchi, S., ikegami, T., Kashiwagi, K., Alijiwake, S., Inoue, K., Togawa, Y., Irawa, M., Ohara, F., Warahiri, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okaliki, Y., Kiramaisi, M., Inder, Y., Kira, A., and Hajashilaki, Y., Rikiminteqrated sequence analysis (RISA) system—3R4-format sequence analysis (RISA) system—3R4-format commons Risk in the Will Matsual Statement (2000)
 Shibata,K., Itoh,M., Alcawa,K., Naqaoka,S., Sasaki,N., Carninei,P., Konno,H., Akiyama.J., Nishi,K., Kitsunai,T., Tashiro,H., Itoh,M., Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A.,
 High-efficiency full-length cDNA cloning Meth. Enzymol. 303, 19-44 (1999)
 Carning P and Hayaghiraki, y
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Submitted (10 JUL-2000) Yoshihide Hayashinaki. The Institute of

Hayashizaki,Y. Direct Submission

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AGENCOURT 65661 GENTH MGC_67 Homo sapiens cDNA clone IMAGE:5550905
 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostómi;
 66.7 ACHONGHARCHACHACHACHARAHCHARCHIGGERAAAAATHECHIGGALCACHTH 726
 122 LeutenAlatysGlyGluValLeuGlnMetGluAspAspLeuValIleSerPheGlnLeu 141
 787 ATGITGIGIGIAGITGACITATITATIAAGITCICACCICCIGCACTACICAGAGGCA 846
 182 ArgSerAlaArg11eAlaLysG1nLeuG1uAsnAspThrArg11eI1eG1uVa1LeuCys 201
 242 LysArqTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArgLeuPheLeuAsp 261
 262 HisAsptysThrizaGinThrAspSerileAspSerPheGluThrGlnArgThrProArg 281
 282 LysSerAsnLeuAspGluGluValAsnVallleProProHisThrProValArgThrVal 301
 102 Met AsuThrileGinGluLeuMet Met IleLeuAsnSerAlaSerAspGinProSerGlu 321
 Mammalia: Butheria: Primates: Catarrhini: Heminidae: Homo.
1. (Chases 1-to 1051)
MIH MGC http://west.nih.gov/.
National lustifutes of Health, Mammalian Gene Collection (MGC)
82 PheAlateuPheSertysLeuGluArqthrCysGluLeuIleTyrLeuIhrGlnProSer 101
 142 MotteufysValleuAspTyrPhelleLysLeuSerProProMetLeuLysGlupro 161
 162 lyrtysthrAlaVallleProlleAsnGlySerProArqthrProArqArgGlyGlnAsn 181
 222 PheMet AsriSert.cui31y1.cuVal1hrSerAsriG1y1.euProG1uVa1G1uAsriTeuSer
 422 AsuleulleSerTyrPheAsuAsuCysThrValAsn 333
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 Email: eqapbs:r/mail.nih.gov
lissue Procurement: ALCC
 BM561083.1 GT:18805043
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cona Library Preparation: Life Technologies, Inc.

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/lab_host="OHIOB (phage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT5; Site 1: Not1;
Site_2: Sall; Cloned unidirectionally. Frimer: Oligo df.
Vector insert size 1.75 kb. Library constructed by Life Technologies."
cDNA Library Arrayed by: The L.M.A.C.E. Consertium (LLNL)
DNA Sequencing by: Ageneourt Bioseience Corporation
Clone distribution: MGC clone distribution information can be
 996 PheSerLysLeuLeuAsnAspAsnIlePhellisMetSerLeuLeuAlarysAlaLeuGlu 415
 436 SerPheProTrp11eLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysVal111e 455
 244 TCTTTCCCATGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGATTTTACAAAGTGATC 403
 456 GluSerPbelleLysAlaGluGlyAsuLeuThrArqGluMetIleLysHisLeuGluArq 475
 476 CysGluHisArqlleMetGluSerLeuAlaTrpLeuSerAspSerFroLeuFheAspLeu 435
 864 TGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCACCTTTATTTGATCTT 423
 496 TELLYSCHUSETLYSASPATGCLUCLYPTOTATASPHISLEUGLUSETATACYSPTOLOU 515
 536 ProlystystystyserthrthrArqValAsuSerthrAlaAsuAlacluthrGluAla 555
 556 ThrSerAlaPheGlnThrGlnLysProLeuLysSerThrSerLeuSerTeuLyerLys 575
 356 AlaValGlyGlnGlyCysValCluIleGlySerGlnArqTyrLysLeuGlyValArqLeu 375
 376 TyrTyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerTleGluAsn 395
 516 AsnLeuProLeuGlnAsnAsnHisThrAlaAiaAspMetTyrLeuSerProValArqSer
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 found through the I.M.A.G.E. Consortium/LLNL at http://image.llnl.gov
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 (Saps)
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Location/Qualifiers
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| 595 Chery<br>DB,                                             |                                                   | 616 0y 13                                                                                                                              | 900                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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                                                                                                                                                                                                                                                                                                                                                          | 74 Y                                                      | 7:4L,8AspLeuPr 655 Qy 171<br>  :::            <br>accaddaticipied 903 Db 123 | 674                                             | g63 pb                                 | 5 4                                                      | AAACCAAATA 1020 Db 243                          | Qy 231   | Ep mena librar light 62-way 2002 F.b. 363<br>Homo sapiess china elebe IMACP-644452 | Cy 251       | 5.5 da                        | LT O Q 27               | erata, Buteleustemi, nb. 423<br>inidae: Homo.                                                                            | 0y 291                                                | Collection (MGC)   Db 483                                           | φ <sub>γ</sub> 311                                                | - Db 543                 | AUC. (11 N') Cy 331                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | oration man by 603<br>at:                                                                                 | 138 40                                                    |                                                         | 178 20                           | (4) 723                                        | 191 190                                                         | 183 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op. 150 Op | reals, sittings, woll)  7: and primed                                                                               | y Life Technologies Dp 843                                              | RESULT 4<br>BM475603<br>LOCHS | DEFINITION                     |
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| 1 (bases 1 to 881)<br>NIH-MGC bite://mgc nci nih gov/ | National Institutes of Health, Mammalian Gene<br>Unpublished (1999) | Contact: Pobort Strausborg, Ph D.<br>Email: cgapbs-ramail.nib.gov | Tissue Procurement, ATCC | COMM Library Ereparation: Life recommondates, COMM Source: A ranged by The The Common Common Source: The Actual Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common Common 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Consortium/LINI | http://maga-llnlacv<br>Plate: LLAM13287 row: e column: 03 | High quality sequence stop. 690.<br>Location/Qualifiers | 1881<br>/organism-"Homo sapiens" | /dr.xr=1-"'-ax a606"<br>/clone-"IMAGE:6044522" | /clone_lib="NIH_MGC_92"<br>/fissor tone="ombrooms" carcinems_cs | Zerbookergre smortona (architectura) or Zerbookergre smortona (architectura) or see the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the seed of the se | Ziori stagan, realta, victor puny at<br>Sile,27 sali, orașe anidirențional<br>Average insert side 2.5 Mb. 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| .76                                                          | - file.                                           | 1.00 m                                                                                                                                 | †<br>1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                                                                                                                                                                                                                                                                                                                                                          | ė<br>c                                                    | 5) (25)<br>30) 834                                                           | UY 6.55 0                                       | 104                                    | CT 675                                                   | 406                                             | RESULT 3 | LOYUS<br>DEFINITION                                                                | No. London A | VERSI N                       | SHIRCE                  |                                                                                                                          | REFERENCE                                             | J. 11 P.E.<br>Journal                                               | IN HEM                                                            |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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 GluAsnAspThrArgl:cllcGluVa!LcuCys!;ysGluHisGluCysAsp:lcAspGlu
 AsnLysAspLeuAspAlaArgLeuPheLeuAspHisAspLysThrLeuGlnThrAspSer
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//lab_iost="hHibw [phage-resistants"]
//lab_iost="hHibw [phage-resistants"]
//site_2: Sall; Cloned unidirectionally: plign-dr primed
//serear insert size 2.5 kb. Library enriched for
lull-length clones and constructed by Life Technologies
Note: this is a NIH_MGC_Library.
 Eukaryota: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
 UNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
tound through the L.M.A.G.E. Consortium/LLNL at:
 157 ukantysGluProTyrLysThrAlaVallleProLleAsnGlySerProArqThrProAr 177
 National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
 97 uThrdlnProSerSerSerileSerThrGluIleAsnSerAlaLeuValLeuLysValSe 117
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 218 TEGGATCACATTTTATTAGGTAAAGGGGAAGTATTACAAATGGAAGATGTGGTGAT 277
 137 eserthedlineuMetLeudysValLeuAspTyrPheIleLysLeuSerProProMeilLe 157
 338 GCTCAAAGAACCATATAAAACAGGTGTTATACCCATTAAIGGTTCACGTCGAACACCCAG 397
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 38 G FOOGAGIAALIGAIAGAAGIAGAAAGIIGAIAAIGGIAIGTGAAGACTGTTGAAGAAG 97
 78 TyrAspValleuPbaAluLeuPbeSerLysLeu-GluArgThrCyschuLeulleTyrLe 97
 CONA Library Preparation: Life Technologies, Inc. CONA Library Arrayed by: The L.M.A.G.E. Consortium (LENE)
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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 Contact: Robert Strawsberg, Ph.D.
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/db_xret "taxon:9606"
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 Gaps:
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High quality sequence stop: 734.
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Ammalia; Eutheria; Primates: Catairhini; Hominidae; Homo.
1 (bases 1 to 72?)
Foustka,A., Wellenreuther,E., Mewes,H.W., Weil,E. and Wiemann,S.).
EST (Poustka,A., Wellenreuther,E., Mewes,H.W., Well,E. and Wiemann
 Heidelberg/Germany) within the cONA sequencing consortium of the
 Please contact the RZPD: Ressourcenzentrum, Houbnerweg 6, 14059
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 Reseatch Center (DKFZ); Email s.wiemann4dktz heidelberg.de; sequenced by DKFZ (German Caneer Research Center,
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Berlin-Charlottenburg, GERMANY; Email: clone4rzpd.de.
 Max-Planck-Institute for Molecular Genetics
Thmestrasse 73, 14195 Berlin, Germany
Tel: 49-30 84131623
 Email: poustka mpime berlin dahlem mpq.de
This is the 5' sequence of the clone insert
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 Contact: Poustka A.J.
 German Genome Project
 Fax: +49-30-84131128
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Average insert size 2.5 kb. Library enriched for
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Note: this is a NH=MGC Library."
 Homo sapiens
Eukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia: Eutheria: Primates; Catarrhini; Hominidae; Homo.
 DNA Sequencing by Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lh.igov
Flute: LiAM13279 row: i column: 20
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National institutes of Health, Mammalian Gene Collection (MGC)
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 61 COCASCAGITCGATATCIAS PGAAAIAAAITCIGCATGGGGGGGAAAAAGTIGCTIGGAT
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 Clone distribution: MGC clone distribution information can be
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 cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNE) DNA Sequencing by: Agencourt Bioscience Corporation
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Email: cqapbs r@mail.nih.gov
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 ### CTCCGACGATGACATCGATCATGGAATCCCTTGCATGGCCTCTCAGATCACCTTTA 67
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Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T., Gelsel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,
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 IMAGE Consortium (info@image.llnl.gov) for lurther information.
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Confact. Maria M/Mouse EST Project.
WashU-HMI Mouse EST Project.
Washington Inversity School of MedicineP
4444 Forest Park Parkway, Box 8501, St. Louis, Mc 63108
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was constructed by Bento Soares and M. Fatima Bonaldo. 178 c. 217 q. 261 t. | others 139 LoubysArqValLysAspileClyPyrillePheLysClubysPheAlatysAlaValCly 358459 110-ysAlaCluClyAsnLouThrArqCluMetIIClySHisLouCluArqCysCluHis 478 259 PheterrAspHisAspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArg 278 299 ArgThrValMetAsuThrIleGlnGlnLeuMetMet.IleLeuAsnSerAlaSerAspGln 318 797 I GOGTIGITTI GGAAGTIAI CCAACAA I ITI ATTIGIIGA I ITITIAAAGTGGGGGAATGAGGGC 738 319 ProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIle 338 2.3.2.COSTCAGANTOTGTT-TOSOTGTGTANTATGGGGGGGGTAACHOOGAAAGAATFGGG-679 69 chotycycvidlutloctyserolnArgTyrLysLoGlyValArqLeJTyrTyrArg 378 622 Chaddeighghghgaggairddaghagaggafathaaachthgaghggahgghaifhacegh 563 199 LenteuAsnAspallePheHisMetSert.cuLeuAladysAlaLeuGluValValMet 418 419 AlaThrTyrSerArgSerThrSerGlnAsuLeuAspSerGlyThrAspLeuSerPhePro 438 439 TrplleLeuAsnValLeuAsnLeuLysAlaPheAspPheTyrLysValIleGluSerPhe 458 482 T03ATTCTGAAGGTACTTAATTTAAAAGCCTTTGATTTTTACAAAGGTGATTGAAAGTTTT 323 422 ATCAMAGIGGAAGCCAACTIGACAAGAAAAIGATAAAAACATITAGAAAGGIGGGGAT 263 479 ArqIleMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 498 499 SertysAspArgGlgGlyFroThrAspHisLeaGluSerAlaGysProLeaAsnLeuPro 518 519 LoughnAsnAsnHisthrAlaAlaAspMetTyrLeuSerProValArqSerProLysLys 538 39 LysdlySerThrThrArqValAsnSerThrAlaAsnAlaGluThrGlnAlaThrSerAla 558 85 AGAACHTCGACHACACGGGAAATTCLGCTGGAAATACAGAGACACAAGCAGCTCAGGC 26 279 Thr ProArgLysSerAsnLeuAspG1uG1uVa1AsnVa111eProProHisThrProVa1 Conservative: Mismatches: Indels: Lordth: Matches: US 09 026 459A 44 (1 851) x AA763411 (1 914) 7, 89c-102 1056, 50 82.14% 4.26. 12 24.178 257 3 Best Local Similarity: Percent Similarity: Aliqument Scores: QUELLY Match: AASE COUNT RICHN ŝ = = â

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was primed with a NoTI-ollgo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with NoT I and eloned into the NoT I and Eco RV sites of the pCMySPORI 6
 vector. Library was normalized. Library was constructed by Lite Technologies. Contact: Fend Library and Library Fend Center Technologies, a division of Invitrorer 9800 Medical Center Drive Rockville, Maryland 20850, USA Fax: (1) 301-610. http://fullength.invitroden.com".

http://fullength.invitroden.com".

1 19 q 255 1 26 others
 /note-"organ, brain, Verton, poMVSPoki 6, ist strand cDNA
 Eukaryota, Metazoa; Chordata; Craniala; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 AL563757 LTI_NTL001_NEG4 Home sapiens conn clone esophono7YA05 4
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 611 ATGAATICTCTTGGACTTGTWAAATCTWATGGACTTCCAGAGGTTGAAATTCTTTTAAA 552
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 Genoscope - Centre National de Sequencaqe
BP 191-91006 EVKY cedex - France
Email: segref genoscope ens.tr, Web : WWW.genoscope.cus.tr.
 203 CluHisGluCysAsnIleAspCluValLysAsnValTyrPhcLysAsnPhelleProPhe
 Full length cDNA libraries and normalization Unpublished (2001)
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 AL564757.1 G1:12914464
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1043.00
84.53%
81.89%
23.86%
 prime, mRNA sequence.
 (bases 1 to 792)
 Contact: Genoscope
 793
 Homo sapiens
 Best Local Similarity:
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 Percent Similarity:
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AL599633 605 bp mRNA linear EST 14-AUG-2001 DKEPP314P092 rl 313 (synchym: bloc2) Homo sapiens rDNA rlone DKEYP313P092 57, mRNA sequence.
 Am Klopferspitz 19a N 92152 Martinsried, Germany
This is the 5 sequence of the clone insert
Clone from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Conter (DRE2); Email s.wiemannedkiz heidelberg.de;
sequenced by MMYZ (Biomedical Research Center at the Charite,
Herlin/Germany) within the Gena sequencing consortium of the German
 Homo sapiens
Eukaryota: Motazoa: Chordata; Craniata; Vortobrata; Euteleostomi;
 No.s1 sequence available.
This clone (DKE) TP692) is available at the ETP5 in Reflin Please contact the RZPF Pessourcentenny, Heubnerweg 6, 14059 Berlin-Charlottenburg, GHRMANY: Fmail: clonearzpd_dc_iccation/Qualifiers
 1 (bases 1 to 605)
Khohrer,K., Beyer,A., Mewes,W., Weil,B. and Wiemann,S.
EEI (Kochrer K., Reyer,A., Mewes,H.W., Weil,R. and Wiemann,S.)
Unpublished (1999)
24. ArgTyrGluGluIleTyrLevtLysAsnLysAspLeuAspAlaArqLeuPheLeuAspHis 262
 251 AAGGATWIKGGATACWIYTTTAAAGAGAAATTTGCTAAAGCTGTGGGGACAGGGTTTGTGTC 192
 263 AsplysthrieudinthrAspSeriicAspSerPheGluthrGluArgThrProArgiys 282
 28 * SerAsnLeuAspGluGluVaiAsnVallLeProProHisThrProValArgThrValMet 302
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 411 YEGITITCYIWITITIAGGACTGCACAGTGAATAAGAAAGTATATACTGAAAAGGG 252
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 Mammalia; Butheria: Primates: Catarrhini; Heminidae; Homo
 ALS99633.1 G1:15162921
 Contact: Kochrer K
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/organism-"Homo sapiens" /db\_xret "taxon:9606"

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694 bp mRNA linear EST 12.JUN-2000
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata; Euteleostómi;
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1037.00
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 398 Lys 398
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from ORESIES PCR (U.S. Letters Patent application No. 196, 716 - Ludwig Institute for Cancer Research) profiles into the PUC 18 Vector. Reverse transcription of tissue minh and cDNA amplification were performed under low stringenery confiling.
 Naqai,M.A., da Silva,W. Jr., Zaqo,M.A., Bordin,S., Costa,F.F.,
Foldman,G.H., Gervalho,A.F., Matskima,A., Baia,G.S., Simpson,Dy.H.,
Frunstein,A., deolyseise, P. B., Hucher, P., Joingeneel, C.V., O'Haro,
M.J., Soares,F., Brentani, R.K., Reis,L.F., de Souza,S.J. and
 This sequence was derived from the FAPESP/CLOP Human Canner General Conject. This entry can be seen in the following URL (http://www.llukja.ra.lafesrefiles.gettimiz.pl.els.az. 002 RF642_210.200-014_006af4-2000-02-21644-1)
 1 (bases 1 to 694)
Dias Neto,E., Garcia Gorrea,E., Verjovski-Almeida,S., Brignes,M.R.,
 /note="order" breast: Vector: pucl8: Site_1: Smal; Site_2: Smal; A mini:library was made by cloning products derived
 Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
 Shotqun sequencing of the human transcriptome with ORF expressed
 429 ASSPTYREBATA FARRETT STATES THE CONTINUE THE STATES
 469 TyrLySLoutTyValArqLoutTyrTyrArqValMetGluSerMetLoutTySSerGluGlu 488 HELLILETHEELEHHELLITHEELEH
 49 PhetysolutysPheAlatysAlaValGlysTuGlysVaValGluTLeGlySerGluArg 368
 517 FLLAAAGAAAALITGTTAGAGTIGTGGGACAGNTIGTGTGGAAAFTGGALGAGAGGGA 558
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 Laboratory of Cancer Genetics
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10 40,00
 Lel: +55 11 2704922
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 Simpson, A.J.
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1 (bases 1 to 623)
Mellon, D., Meadows, A., Clitton, S., Hillier, L., Marra, M., Pape, D.,
Wylie, T., Martin, J., Bistain, A., Schmitt, A., Theising, B., Ritter
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K., Tsagareishyil, K., Williams, T., Jackson, Y. and Howers, Y.
Washu-Harvard Panereas ESI Project
 14 MAR 2002
 Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
 DNA sequencing by: Washington University Genome Sequencing Center
 For information on obtaining a clone please contact: Juliana Brown
 This sequence now available from the IMAGE consortium, for clone confers confact: info-finate.iInl.qov seq primer; -4000 from Gluco High quality sequence stop: 430.
 Homo sapiens
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata: Euteleostemn;
 Tallh09.yl Human Pancreatic Islets Homo sapiens clond clone Impage:56.88049-5' similar to qb:MI5400 RELINGHLASTOMA ASSOCIATED PROTEIN (HUMAN): qb:M26.49! Mouse retinoblastoma sasceptibility protein (MOUSE):, mRNA sequence.
 Zuote-Torgan: Pancreas; Vector: pSPORT): Site 1: Not 1;
Site_2: Sal 1; Library constructed using SuperScript
 Plasmid Library Kit (Life Technologies), conA made by
 449 PheAspPheTyrLysVallleGluSerPheIleLysAlaGluGlyAsuLeuThrArqGlu 468
 469 MetileLysHisLeuGluArqCysGluHisArqIleMetGluSerLeuAldTrpLeuSer 488
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 509 LeuGluserAladysProfeqAsnLeu-ProfeqGlaAsnAsnHisThrAlaAlaAspMe 528
429 LeuaspserdlythraspleuserPheProlipHielenashValleuashLeulysala 448
 Douglas Melton, Klaus B. Kaestner, & Biroshi Inoue
 Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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 528 (Tyr LeuSer ProValArqSerProLysLysLysS)yserThrThrArqVal 949
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 Libraries were constructed by Dr. Douglas Melton
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 Unpublished (2000)
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 Fux: 617-495-8557
 MA 02138
 Confact:
 AW58 4181
 human.
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EST 27-JAN-1998
oligo-dT priming. Size-selected by column tractionation;
 Mus musculus
Eukaryota; Metazoa; Chordata; Craniata, Vertebrata; Buteleostomi;
 vw54b61.rl Sodros_mammary_gland_NMLMS Mus muscatus cond closes iMade:1247665 5f similar Fo gb-M15400 NerthodraSrowa Associated PROTEIN (HUMAN): qb:M26391 Mouse retinoblastona susceptibility protein (MOUSE); mRNA sequence.
 293 OPTORISTARPROVALARGIALVAlMetAsnThrIleGlaGlaLeuMetMetIleLeuAs 313
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 2.4 VallyrPhetysAsnPhetLeProPheMetAsn+SerLeuGlyLeuValThrSerAsnCl
 average insert size 1.08 kb. Primary library, unamplified."
 1 others
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 с9 126-459A-34 (1-851) x AW583181 (1-623)
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 394 eClnAsnPheSerLysLeu 399
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Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dübuque,L.,
Ceisel,S., Kucaba,T., Lacy,M., Ge,M., Martin,J., Morris,M.,
Scheilenberg,K., Steptoe,M., Tan,F., Underwood,N., Moore,B.,
Thelsing,B., Mylle,T., Lennon,G., Soares,B., Wilson,R. and
 /note-vector pTTT3D-Pac (Pharmacia) with a modilied polylinker; 1st strand cDNA was prepared from mammary pland tissue from a lactating female, and was then primed bild of the form of the primed with a Not I - Oligo(dT) primer. Double stranded cinA was ligated to Ecc R: adapters (Pharmacia), dispated with Not I and cloped into the Not I and Eco PI sless of the medified pTTT3 vector. Library is nummified. Library was constructed by Bento Scares and M. Fatima Bonaldo. "
 CDNA Was
Manufalia; Eutheria; Rodentia; Schuroqnathi; Muridae; Murinae; Mus
1 (bases 1 to 871)
 This clone is available regalty from through Limin, contact the IMAGE Consortium (into@image.llnl.gov) for further information.
 298 alArgThrValMetAsnThrIleGlnGlnLeuMetMet,IleLeuAsnSerAlaSerAspr 318
 318 InProSerGluAsnLeuIleSerTyrPheAsnAsnCysThrValAsnProLysGluSer1 338
 338 halootysaargvallysAspileGlyTyrilePhetysClurysPheAlutysAluvald 358
 358 lyfluflyfysValflifleflySerflaArgTyrLysLeaGlyValArgLeifyrTyrA 378
 803 ITMG-GOCCITITIGALACTACTCCACCATLAGGGGGGTITTTAALITICGCCAAGIALCA 745
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 584 IONIAGGAGTIAAAGGIGIGIGGGAGAGAAAAGAAAGAGGIIGIIAAGGIGG
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 Homo Sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| NO.        | P. C. C. |           |                |             |               |                          |
|------------|----------|-----------|----------------|-------------|---------------|--------------------------|
| -          |          | 49.5      | 136.4          | =           | AKU11246      | AKULIZ46 Mus musel       |
| ~1         | 1551     | 34.3      | 107.1          | ~           | BMS61083      | ~                        |
| ·*         |          | 30.3      | 88.1           | 7.4         | HQ220275      |                          |
| 4          | , * ±    | 57.9      | 1001           | -           | BM475603      | BM475603 AGENCOURT       |
| u y        |          | 26.1      | -1             | 9           | AL:597811     | ALLOZHII DKEZPALE        |
| اتب        | ~<br>~   | 3.<br>3.  | 1:<br>30       | -           | #Connect      |                          |
| -          |          | CT        | υ<br>Τ         |             | BM4 % 47.24   |                          |
| <b>a</b> ) |          | <br>      | 1024           | ~           | MM450031      | HM450031 AGEN-CODE       |
| 2          |          | 24.0      | 8 12           | 5           | A1646048      |                          |
| c 10       | 3        | 27.0      | 914            | 5           | AA76 1411     |                          |
| _          |          | 21.7      | 766            | 31          | A1.564757     | ALSO 4757 ALSO 4752      |
|            |          | 21.6      | 6.0%           | <i>3</i> ** | Al.599633     | ALS 996 (4) DKFZp (131)  |
| ¥. 5       |          | 21.5      | 694            | -           | HEO82846      | MICHZHAF RCZ BIOE4       |
| 14         | _        | 21.2      | 17.3           | 10          | AW58 1181     | AW584181 (a)11h09.7      |
| #3<br>     | 1013     | 21.1      | 13             | ٠,          | AA76 1485     |                          |
| 16         | 7        | 20.9      | 6.7            | .^ <b>2</b> | BG25 4 4 4    | 827 #94 739 0 #54 577 SI |
| 17         |          | 20.4      | 333            | 10          | AW 55.82.14   | -7                       |
| - 32       | 974.5    | 20.3      | 70%            | J           | A1646097      | A1546097 vw54h07 x       |
| 1.5        |          | 20.1      | 7 46,          | -           | H1151568      | X1.3[2/09 895]2[1]       |
| 7.0        |          | 20.0      | 544            | 2           | AV715534      | AV715544 AV715544        |
| 2.1        |          | 19.9      | 584            | 1.5         | 1861149050    |                          |
| 22         | 96       | 19.8      | 7 14           | 7 7         | BF144857      | 191144857 60179034       |
| 7.3        |          |           | 5.40           | 3           | AL692790      | ALES2790 DKF264141       |
| 24         | 615      | 19.0      | 615            | J           | AA959846      | AA359836 VW54101.8       |
| 5.5        | 806      | 18.9      | 147            | 10          | HE5 1927B     | HE539278 601063567       |
| -}         |          | 1)<br>(1) | <br><br>       | :=          | BMB J T J J J | MBG2736 AGLNCORRI        |
| 27         | 88       | 18.4      | 100            | -           | AL120941      | ALLIZOS41 DKFZp762D      |
| <b>ι</b>   | 879      | 18.3      | 134            | 13          | B1526982      | B1526382 602527177       |
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| 0°<br>≎    | 958      | 17.9      | 263            | 2           | HE931236      |                          |
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| 2          | 80       | 17.4      | 646            | ~           | BM490416      |                          |
| *)<br>(4)  |          |           | 464            | 0.7         | AWS02887      | ANYOZHRZ DI-HE-BNO       |
| 7          |          | 17 . 2    | 10<br>10<br>10 |             | BE692220      | BEC92220 at 26e03.x      |
| £.         | 8]       | 17.0      | 74<br>24<br>W  |             | AA072780      | AA-72780 mm76a05.1       |
| 46.        |          | 16.7      | 64.4           | 7           | H1553447      |                          |
| 3.7        | 784      | 16.4      | 2084           |             | HM456728      | HM45572B AGENCOURT       |
| œ          |          | 15.7      | 45.4           | 0           | AW50 45.14    | AW'O 3'14 UL HF BNU      |
| 6.         | 7        | 14.9      | 529            | <i>3</i> *  | AA459709      | AA959709 VW54404.8       |
| ्7         | 703      |           | 7 1 7          | <i>&gt;</i> | AA955457      |                          |
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| C 43       | ٣        | 14.2      | 4.5 H          | <u>-</u> 4  | HF827047      | HFB27047 RC3-HNG02       |
| 7.4        | 681.     | 14.2      | 466            | 7           | CB2 404       | CE2304 CB2304 LOUK       |
|            |          |           |                |             |               |                          |

ALT: CNMENTS

RESULT 1 AK011246 COCUS

Timesa: BIC 19 JAN 2002 AKO11246 | 1864 Ep mRNA | Energy HET 19 JAN 20 Mus musculus 10 days embryo whole body cDNA, FIKEN Inll length enriched library, clone:26:00617M22:retinoblastoma 1, full insert sednence. DEFINITION

AKÖI1246.1 GI:12847244 HTC: CAP trapper. ACCESSION VERSIÓN KEYWORDS SOURTE

Mas musculus (strainte.578L/bd) 10 days embryo con to mkNA, elone\_lib:RIKEN full-length enriched mouse chNA tobraty elone:2600017M22.

Mus musculus ORGANISM

Eukaryota, Metazoa, Chordata, Craniata, Vertebruta, Enteleostomi, Mammalia, Eutheria, Rodentia, Scinroanathi, Muridae, Murinae, Mus

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 Marchionni, I., Mashima, J., Mazzarelli, J., Mombaerts, P., Nordone, P., Rino, B., Pinyald, M., Redriquez, L., Sakamoto, N., Sasaki, H., Sato, K., Schonbarh, C., Seya, T., Shibata, Y., Storch, R. F., Suzuki, H., Ioyo oka, K., Wang, K.H., Weitz, C., Whittaker, C., Wilming, L., Wyushaw-Horis, A., Yoshida, K., Haseyawa, Y., Kawaji, H., Kohtsuki, S.
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 Schmitted (10-344-2004) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (EKEN), Laboratory for Genemic Exploration Research Group, BIREN Genomic Sciences Center (GSC), RIKEN Voxolama institute: 1 7:22 Suchiro-cho, "surumi Ku, Yokchama, Kanadawa 230-0045, Japan (E-mail-aenome resided. Liken 40:19, Williams (E-mail-aenome resided. Liken 40:19, Williams (GRE) Hilliams (E-mail-aenome resided.)
 Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-690 (2001)
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National Institutes of Health, Mammalian Gene Collection (MGC)
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 424 ATTANACAATCAAAAGAPCGAGAAGGAPCAAFTGATFAPTTGAAFG1GG11G1GCTT 483
 184 AATCTTCHTCHCCAGAAAPAAFCAGAGGGGAGATAFGTATGTFTFTFTGTAAGAFGT 543
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 433 thrserAlaPheGluThrGlntysProLealysSerThrSerLeuSerLeuPheTyrLys 652
 45.4 LysValTyrAraLeuAlaTyrLeuAraLeuAsnThrLeuCysGluArqLeuLeuSerGlu 672
 693. Gluteumet ArgAspArgHistonAspCln DewerMet@sscrwschychgelb 0gs. 710
 714 LyavaliysAsnileAsp LeurysBaclysIloTloValThrAlaTyrLysAspLeupr 732
 732 OHTeATaValqinqiuThrPbALysArqVal-LeuileLysGluGluGlu-TyrAspser 751
 904 TCAIGCIGNICAGGAGACATICAAACGTGTGTTGATCCAAGAAGAAGAAGAATATGATCC 963
 964 IATATAAGNATTEETATAAETEEGGGOOTTTEATGCAAGGAAGTGAAAAAAAAATA 1026
 Clone distribution: MAC clone distribution infortiound through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Contact: Robert Strausberg, Ph.D.
 Email: cqapbs-remail.nih.gov
Tissue Procurement: ATCC
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High quality sequence stop: 690 Location/Qualifiers

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/tissuc_type "umbrychai vareinoma, cell line"
//dab.host "DH10B (phage-resistant)"
//note--Organ: testis; Vector: pow-SPORT6: Site 1: Not1:
Site_2: Sali, Cloned unidirectionally; oligo-df primed.
Average insert size 2.5 kb. Library enriched for
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 869 ANTANAGATETAGATGETAGATATITITIGGATEATGATAAAACIETICAGACIGAITET 422
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 603 NORGIGAATOOAAAAGAAAGTATAOTGAAAGAGTGAAGAATAIATAGATAGATTAAAA 662
 248 GlySerProAryThrProAryArySlySluAsnArySerAluArgIleAlatySClnLew
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 328 AsalysAspLeuAspAlaArgLeuPheLeuAspHioAspLysThrLeuGlnThrAspSer
 408 SerAsnSlyLeuProGluValGluAsnLeuSerLysArqTyrSluGluIleTyrLeuLys
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Indels:
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/clone "lMAGE:6044522"
/clone_lib-"NIH_MGC_92"
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 Eukaryota: Metazoa; Chordata: Craniata; Vertebrata; Euteleostomi;
 cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayod by: He L.M.A.G.E. Consortium (LLNL) MAN Sequencing by: Agencourt Bloscheme Corporation Clone distribution: MGC clone distribution information can be found through the T.M.A.G.E. Consortium/LLNL at:
Plate: LLAMM.2525 row: f column: 94
 155 FyrAspValtzeuPheAlatzeuPheSerLysLeu-GluArgThrCysGlutzeuIleTyrLe 174
7.2.4. PTD GAGTEON FOR A TRACTACTOR FOR TROUBLEADA FOR ABANGA AGA TRE
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 98 IATGA GIATTITTGCACTGITCAGGAAATTGGGAAAGGACGGTGAACTTATATATTT 157
 174 utherstuteresersersterserthreluffeAsnSerAlaheuValleutysValSe 194
 National Institutes of Health, Mammalian Gene Collection (MGC)
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/clone "!MACE:5575683"
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Email: cqapks-rmail.nih.gov
Tissue Procurement: ATCC
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 394 pGInProSetGluAsni.culle Serlyr PheAshAshrysthrval AshProLysGl 413
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 254 qArqGlyGlnAsnArqSerAlaArqIleAlaLysGlnLeuGluAsuAspTtdArqIle1[274
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 194 rIrpileThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuVall1 214
 218 TTGGATCACATTTTTALFAGCTGAAGTALFACAAALGAAGAGAGAGALCEGGTGAL 277
 234_stestysClatrolyrtysThrAlaValiteProffeAsrGlySerProArqThrProAr
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This clone (DKFZp313000H6) is available at the RZPD in Berlin.
Please contact the RZPD: Ressourcenteum, Heubherweg 6, 14059
Herlin-Charlottenburg, GERMANY: Email: clone@rzpd.de.
 703 | HeMetMetCysSerMetTyr2(y11e2ystysVallysAsn11eAsploufysPhetys | 722 | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | Hiller | H
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 783 ProfitsTleProAugSerProTytLysPheProSerSerProLeuArqIleProGlyGly 802
 2 AAAICIACCICTCIIICACIGIIIIAIAAAAAAGIGIAIGGGGTAGGCTATCICGGCTA 61
 sequenced by DKFZ (German Cancer Research Center,
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 This is the 5' sequence of the clone insert
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High quality sequence stop: 606.
 82? ThriysMetThrireArgScrArgIleLeuValScrIleOlyCluSerPhcGlyThrScr 842
 843 GluLysPheGlnLysIleAsnGlnMetValCysAsnSerAspArqValLeuLysArqSer 86.2
 1 (bases 1 to 880)
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Kational institutes of Health, Mammailan Gene Collection (MGC)
 482 AACATCTATATTTCACCCCTGAAGAGTCCATAIAAAATTTCAGAAGGTCTGCCAACAACA 541
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 Contact: Robert Strausberg, Ph.D.
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 181 CAGLIAATOGIATGEGEGEGETTEGATETTALTAAAGTGEGAGGEGGATGETTGEGEGAAA 240
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 421 ATACCITITATGAATICTCTGGACTTGTAAGATCTAATGGACTTCCAGAGGTTGAAAAT 480
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 457 ProArqLysSerAsnLeuAspGluGluValAsnValIleProProHisThrProValArq 376
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 845 bp mRNA
 Contact: Robert Strausberg, Ph.D.
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CDNA Library Preparation: Life Technologies, Inc., CDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Aparcourt Rioscience Corporation Clone distribution information distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
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 248 ACACAAGCAACCTCAGCCTTCCAGACCCAGAAGCCATTGAAATCTACCTCTCTTTACTG +07
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Mammalia: Buthoria: Primates; Catarrhini: Heminidae: Hemo
I (bases I to 1023)
NIH:MAC http://mac.nci.mih.nck/
 CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by Alencourt Binschene Corporation
Clone distribution: MGC clone distribution information can be
 370 ClnfyrAlaSerfhrArgProPro fhrLeuSerProlleProHisile-ProArgSe 788
 740 AspserileileValPheTyrAsnSerValPheMetGlnArgLeuLysThrAsnIleLeu 769
 508 GALICIALIATAGIAFFICTAFAACFCGGTCTFCATGCAGAGACTGAAAACAAATATFTG 667
 788 rProlyttys---PheProSerSerPtoLeu---Arg11ePro---GlyG1yAsn---- 803
 National Institutes of Health, Mammalian Gene Collection (MGC)
 734 HisAlaValGinGluThrFheLysAraValLeuileLysGluGluGluTy1AspScrile 752
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/lab_bost-"DH10B (phage-resistant)"
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 Contact: Robert Strausberg, Ph.D.
 24 4538 2 (1 328) A BM450031 (1:1023)
 High quality sequence stop: 643.
 . sdeo
 /rlone-"IMAGE.5528037"
 Location/Qualifiers
 834 ·IleTyrlleSerProLeuLys 810
 788 TATATITITCAACCCCCTGGAA 809
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vw54al0.xl Soarca_mammary_qland_NMLMG Mus musculus cDNA clone
IMAGE.1247610 3' Similar to ab M26391 Mouse retinoblashoma
Susceptibility protein (MOUSE);, mRNA sequence.
 Mus musculus Subvayors (hordata; Craniata; Vertebrata; Euteleostom); Musukaria; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom); Mannia (bases i to 832) (bases i to 832) (Mannia (bases i to 832) (Mannia (bases i to 832)); Mannia (bases i to 842); Mannia (bases i to
 This clone was previously sequenced on the 5° end only, this new data is from the 3° end. Pessible reversed clone: polyT not found
 Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This cleme is available royals, tree through LLML . contact the IMAGE Consortium (inlowimmed-link.gov) for turther information.
 753 IleValPheTyrAsnSerValPheMetGlnArgLculysThrAsnIleLcuGlnTyrAla 772
 813 TyrtysileSerGluGlyLeuProThrProThrLysMetThrProArgSerArgileLeu 842
 833 ValSerIleGlyGluSerPheGlyThrSergluLysPheGlnLysIleAsnGlnMetVal 852
 973 'ystysteuargibeasp'iediodiyseraspdidalagaspolygeriyselsicuiro 292
 482 AAAAAACTACGCTTTGATATTGAAGGATGAGTGAAGGAGGAGGAAGTAAACATCCCCCA 541
 893 GlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrSerThrArgThrArgMetGln 512
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 MGI:661298
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721 AGGGCTCTGATAGGAAAGTAAA AALGALAGGAGALLALGGAGGL CLCTGTAA - 777

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CDNA Was
 /lab best "DHIOB"
//core "Wester pt7: Us Pro (Pharmania) with a modified
polylinker: Ist strand tebak was propored from manmary
quand issue from a lactating temate, and was them primed
with a Not I olique(dT) primer. Double stranded cDNA was
ligated to Ero Ed adaptors (Pharmaria), dgested with Not
I and closed into the Not I and Ero Ed siles of the
modified pt7f3 vector. Library is normalized. Library
was constructed by Konto Soares and M. Fatima Behaldo. "
a 170 c 176 q 214 t 6 others
 180 sorilosorthriluiloasusoralalouVolLouLysValSortrpileThrPheLeu 199 ·
 120 teachdysAsiltethileSerValHisLysFb&TheAshLeuLeuLysSluleAsp 139
 422 G'ASTOLACAGCAAATIASAACGGACGIGIGAACIIAIAIAITGACACAACAAAGAAGI 481
 200 LeuAlaLysGlyGluValLeuGluMetGluAspAspLeuVallleSerPheGluLeuMet. 219
 220 leadysVallauAsplyrPhelleLysLeuSerProProMetLauLeuLysGluProTyr 239
 240 LysThrAlaValII+ProII+ASnGlySerProAr4ThrProAr4Ar4GlyGlnAsmArq 259
 661 ANAACAGNCTOCATOCCATTAATGGNTCACCTCGAACAGCCAGAAGAAGTCAGAACANG 720
 260 SerAlaArqileAlaLySGluLeuGluASnASpThrArqileIleGluValLeuCySLyS 279
 100 01711eCystlePhetleAlaAlaValAspleuAspGluMetSerPhethrPhethrGlu 119
 24.2 GOGATCTGGATCTTTATCGCAGGAGTTGATCTAGATGAGATGCCATTCACTTTTACTGAG 301
 662 ACCASTACCAASSTESTAATSSTATGTCAASSTATGAAGAAGTATAATGTGTTATGT 421
 60 LeucyschutysteutystleProAspHisValArqGluArqAlaTrpLeuThrTrpGlu 79
 20 ProProAlaProProProProProProGluGluAspProGluGluAspS-rGlyPro 39
 40 GluAsplæuProLeuValArqLeuGluPheGluGluThrGluGluProAspPheThrAla 59
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 Matches:
Conservative:
 Mismatches:
/tissue type-"mammary gland"
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Another Vector: pf773D Pac (Pharmacia) with a modified polylinker; lst strand cDNA was prepared from mammary diand fissue from a lartating female, and was then primed with a Not 1 - olido(dl) primer. Donbic stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the madified pf773 vector. Library is nummarized. Library and cloned by Hento Soates and M. Fatima Bonaldo. "

178 c 217 q 261 t lothers
 Title of TS1 27 JAN 1998
 Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,L.
 Mammalia; Eutheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus
1 (bases 1-to-914)
 Bukaryota, Metazou, Chordala, Graniata, Vertebuata, Enteleostomi,
 This vione is available royalt, free through LHM.; contact the
IMAGE Consortium (into"image.llnL.gov) for further information.
 336 Phel.cuAspHisAspLys1biLeuGInThiAspScrTicAspScrPhediu1hiGlnArq 455
 Geisel,S., Kuraba,L., Lacy,M., Le,M., Martin,L., Morris,M.,
Schellenberg,K., Steptow,M., Tan,F., Underwood,K., Moore,B.,
Theising,B., Mylle,T., Lennon,G., Soares,B., Wilson,K. and
280 CludisclucysAsaltcAspClaValtysAsaNailytthelysAsatheilerre 298 [HILLI] | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH | HILLIH |
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/db_xiel-"taxon:10090"
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Mammalia, Pytheria, Primales, Catarrhini, Homisidao, Homo
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 94 ProSerGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProTysCluSerTle 415
 418 LevilysArqValLysAspileGiyTyrileFhelysGidLysPheAlaL,cAlaValGiy 435
 4 of other yeysvaldlulledlyserdinArgTyrLysLeuGlyValArgLeuTyrTyrArg 455
 426 LewLewAsnAspAsnIlePheHisMetSerLewLewAlaCysAlaLewGluValValMet 495
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 576 SertysAspArgCluGlyProThrAspHisLeuGluSerAlaCysProLeuAshLeuPro 595
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 145 PIGGAGGIAACCATACHGCAGCAGAGATATGTATCTTCTCCTCTAAGATCTGCAAAGAA 86
 7.16 (TPTE) CoAsiaVa (LeaAsata attysALatheAspthe) yr Lys Va (100-40) (SoutheasptheAs
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 240 1/ys/hr41ava111eProlleAsnG1ySerProArqThrProArqG1y01nAsnArq 259
 260 SeralaArgileAlaiysGluteuGluAshAspihaArgileHeGluValleuGystys 279
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 380 Asparbrile@loglolouMetMetHeLeuAsnSerAlaSerAspGloProSerGluAso 399
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 340 AspLysThrLeuGlnThrAspSerIleAspSerPheGluThrGlnArqThrProAralys
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1 (bases 1 to 792)
Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Pull-length cDNA libraries and normalization
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1 (bases 1 to 605)
 Zhote "Vector: phriplExz: Site_1: StilA; Site_2: SfilB; cDNA collection"
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Berlin Charlottenburg, GERMANY; Email: clone:rzpd.de.
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 Kochiretek, Beyer, A., Mewes, W., Weil, B. and Wiemann, S. ESI (Kochiretek, Reyer, A., Mewes, H.W., Weil, B. and Wiemann, S.) Onpublished (1999)
420 LysAspiloclyfyrilloPhotysGludysPhoAlaLysAlaValGlyCysVal 499
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 479 AspAsnIlePheHisMetSerLeuLeuAlaCysAlaLeuGluValValMetAlaThrTyr 498
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 Dias Neto E., García Correa, K., Verjovski Almeida, S., Briones, M.K., Nagai, M.A., da Silya, W. Jr., Zado, M.A., Bordfo, S., Costa, F.F., Coldman, G.H., Carvalho, A.F., Matsukuma, A., Hara, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Hucher, D., Jongererl, C.V., O'Hare, M.J., Soares, F., Brentani, R.K., Keis, D.F., de Souza, S.J. and Simpson, A.J.
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Mammalia: Eufheria: Primates; Catarrhini; Hominidae; Homo.
 Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andat, 01569 019, São Panto SP.
 Shotgun sequencing of the human transcriptome with edg expressed
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 275 GluVal Leuc'ysLysol (2017); (Archys) (Archys
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 375 ValArqThrValMetAsnThrIleGlnGlnLeuMetMetIleLeuAsnSerAlaSerAsp
 335 LeuPheLeuAspHisAspLysThtLeuGluThrAspSerIleAspSerPheGluThr31n
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 Proc. Natl. Acad. Sci. U.S.A. 97 (7), 4491-4496 (2000)
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 Contact: Simpson A.J.G.
 BE082846.1 GI:8473151
 (bases 1 to 694)
 sequence tags
 Homo sapiens
 20202664
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 926. PhoAspPhoFyrtysVallfocluSorPhoTietysAlaGluClyAsnLouThrArgGlu 545.
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 /organism-"Homo sapiens"
 Seq primer: puc 18 forward
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High quality sequence stop: 669.
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1 (bases 1 to 623)
Mellon, F. Marfa, M. Cliffon, S., Hillier, L., Marra, M., Pape, E.,
Wylte, T., Martin, J., Blistain, A., Schmitt, A., Theishay, H., Kitter
K., Konko, L., Bennett, J., Cardenas, M., Gibbons, M., McCanu, R.,
K., Tsaqareishvili, R., Williams, T., Jackson, Y. and Howers, Y.
WashU-Harvard Pancreas EST Project.
 Libraries were constructed by Dr. Couglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
For information on obtaining a close please centert Juliana Brown
 Anorea "Argan Panareas, Vertor pSPOPI]; Site]; Not 1: Site_3: Sal 1; Library constructed using SuperScript Plasmid Library kit (Life Technologies); cDNA made by cliqued psimilated to selected by column tractionalium.
 Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridae.
 This sequence whe acallable from the IMAGE conduction, the lone orders contact: info@image.llnl.gov
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Eukaryota, Metazoa, Chordata, Crantata, Verfebrafa, Enteleustomi:
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IMAGE:5638049 5' similar to qb:M15400 RFFINDBLASTOMA-ASSOCTAED
PROTEIN (HUMAN); qb:M26391 Mouse retinoblastoma susceptibility
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 Douglas Melton, Klaus H. Kaestner, & Hiroshi
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 Conservative:
 mRNA
 Mismatches:
Indels:
 Length:
Matches:
 Tel: 617-495-1812
Fax: 617-495-8557
Email: dmelton-biobp.harvard.edu
 /organism="Homo_sapiens"
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 Seq primer: -40RP moses.

High quality sequence stop: 130.

Location/Qualitiers
 Protein (MODSE),, mRNA sequence.
 623 bp
 Gaps:
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 Undocrine Pancreas Consortium
 (brown@fas.harvard.edu)
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AWF83181.1 JI.7200125
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Linear EST 27-JAN-1998
 Marta, M., Hillber, L., Allen, M., Bowles, M., Dietrich, N., Dubuque, I., Gersel, S., Kuedba, T., Lacy, M., Law, Martin, J., Morris, M., Schellenberg, K., Steptoe, M., Tan, F., Underwood, K., Moore, B., Iheisin, B., Wilson, R., and
 Mammalia; Eutheria; Rodentiā; Scinrognathi; Muridae; Murinae: Mus.
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 430 eAlatysAlaValSlyGlnSlyGysValGlsIleGlySerGlnArqTyrLysLeuGlyVa 450
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 (10 yteaProGluValGluAmilenSerLysAraTyrGluGluIleTyrLeuLysAmiLysAs 330
 12.4 ACTECAGAGGI I GAAAA ICTEGI AAACGA FACGAAA FEFET FAFCI I AAAAA FAAAGA - 18.2
 18.3 FCTAGATGGAAGATTATTTTGGATCATGATAAAACTCTTCAGACTGATTCTATAGACAG 24.2
 450_r.PhedluthrdInArgThrProArqLysSerAsnLenAspGluG1uVatAsnVa1116Pr=370
 24 * TETEGAAGGAGGGAAAGGGAAAAAGTAAGGTEGAEGAAGGGGGGGTGATTGG 302
 470 oProHisThrProValArqThrValMetAsnThrHeGlnGlnLeuMetMetHleLeuAs 390
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 42 + POPAAAAGAAAGITATACTGAAAAGAGTGAAGGATAGAGATACATGINTAAAGAGAAATT 482
 484 TGCTAAAGCTUTGGGACAGGGTIGTGGAAATTIGATGACAGGALAGAAAGTFGGAGT 542
 * ACAAGAATTATTGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAAT 62
 (3) pleuAspAlaArqLeuPheLeuAspHisAspLysThrLeuGlnThrAspSerIleAspSe
 4444 Forest Park Parkway, Box 8501, St. Louis, MC 63108
 Washington University School of MedicineP
 Unpublished (1996)
Contact: Marra M/Monse EST Project
 Email: mouseest watsom.wustl.edu
 The WashU-HHMI Monse EST Project
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polylinker; ist strated chunk was prepared from mammary quand than thissue from a lactating founder, and was then princed with a Not 1 - Oligo(dl) prince. Double stranded chunk was ligated to Reo RI adapters (Pharmacia), disested with Not 1 and cloned into the Not 1 and Eco RI sites of the modified pT7T3 vector. Library is normalized. Library was constructed by Hento Soares and M. Fatima Honaldo. 7 172 colors.
 Znote-"Vector, p1714b Pac (Pharmacia) with a modified
 535 helletysaladludlyAsmieufhratadluMetiletysHiskemelnar#?yselluH 555
IMAGE Consortium (into dimage.llnl.gov) for further information
 356 Thr ProArgLysserAsn = LeuAspGluGluValAsnVallTeeroeroHrsTharberoV 375
 375 alArgThrValMetAsmThrIleGInGInLeuMetMetIlleLeuAsmSerAlaSerAspG 395
 395 InProSerGluAsnLeufleSerTyrFbeAsnAsnCysThrValAsnFrd,ysvluSerT 415
 115 leLeuLysArgValLysAspileClyTyrilePActysClutysPheAlaLysAlaValG 435
 584 ICCIAGGAGCITAAAGGIIGICIGCCCACCTIIIAAAAGAGAGGIICTTAAAGACIGIGC 625
 435 TyglegTygysValGTuffeGTySergTeArgyrTystexigTyValArgtesTyTYA 455
 455 rqValMetGluSerMetLeuLysSerGluGluGluGrqLeuSerfleGluAsnPheSerL 475
 475 ystæuteuAsnAspAsnilePheHisMetSertzenteuAjarysAlarenGinValValM 495
 504 CACTOCTAAATGACAACATCTTTCATATGTCTNTACTGGCCTGTGTTGAAGTTGTAA 445
 495 etalalhriyrserargserthrserginasni.cnaspserdlythrasplænserthee 515
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| 1122 13             | 6 656      | 880 14          |                      | 6 762               |                             | 972 13             |                      | 672 13 |                     |                    | 6.18 13            |                    | 624 10             | 605 9              | 922 12               | 580 9                |                     | 01 885             |                     |                    |                    |                     |                     | 597 12             |                   | 734 12             |                    |                    |                    |                    |                    |                    | 2083 13            | 734 13             |                    | 497 12             | 457 9              | 5 78%                |
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| 752.4               | 725.4      | 720.6           | 699.6                | 698.2               | 692.2                       | 8.169              | 678                  | 660    | 9.1.99              | 642.2              | 617                | 614                | 605.2              | 605                | \$ 96.3              | 580                  | 575.2               | 566.4              | 558                 | ក់៖<br>យា<br>ឃា    | 530.2              | 530                 | 875<br>2            | 516.8              | 513.2             | 512.2              | 505.2              | 494.8              | 486.4              | 484.4              | 481.4              | 480.2              | 476.6              | 474.4              | 472.4              | 459.2              | 457                | 457                  |
| 7                   | œ          | 6               | 10                   | 11                  | 근                           | 13                 | <del>- :</del>       | 15     | 16                  | 17                 | 8                  | 16                 | 50                 | 2.1                | C#                   | 23                   | 24                  | U)<br>U)           | 56                  |                    | 58                 | 57                  | <b>ၞ</b>            | ~                  | ₹                 | 3.3                | 34                 | 3.5                | 36                 | 47                 | 38                 | 9.6                | 40                 | 4 ]                | 4.2                | *                  | 4.4                | <b>4</b><br>5        |
|                     |            |                 |                      | U                   |                             |                    |                      |        |                     |                    | G                  | Ð                  |                    |                    |                      |                      | ປ<br>               |                    | 5                   |                    |                    |                     |                     | ٤                  |                   |                    |                    |                    |                    |                    | ن<br>د             |                    |                    |                    |                    |                    | S.                 |                      |

## ALTONMENTS

RESULT 1

| AK011246   |                                                                                  |
|------------|----------------------------------------------------------------------------------|
| LOCUS      | AK011246 1364 bp mkNA linear HTC 19 JAN 20012                                    |
| DEFINITION | Mus musculus 10 days embryo whole body clina, RIKEN full length                  |
|            | controller indially cooler former marking modulational (1 1011 1686). Sequetice, |
| ACCESSION  | AK011246                                                                         |
| VERSION    | AK011246.1 01:12847243                                                           |
| KEYWORDS   | HTC: CAP trapper.                                                                |
| SOUNCE     | Mas mascains (strain. (5781, 63) to days embryo construction.                    |
|            | clone_lib:RIKEN full length enriched mouse conA library                          |
|            | clone:2600017M22.                                                                |
| ORGANISM   | Mus musculus                                                                     |
|            | Eukaryota: Metazoa: Chordata: Craniala: Vertebrata: Enteleostomi:                |
|            | Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus                |
| KEFURENCE  |                                                                                  |
| AUTHORS    | Carninci, P. and Bayashizaki, Y.                                                 |
| TILLE      | High-etticiency full length cDNA cloning                                         |
| JOURNAL    | Meth. Enzymol. 303, 19-44 (1999)                                                 |
| MEDLINE    | 99279253                                                                         |
| PUBMED     | 10349636                                                                         |
| REFERENCE  | 2                                                                                |
| AUTHORS    | Carninci, P., Shibata, Y., Hayatsu, N., Suqahara, Y., Shibata, K.,               |
|            | itah, M., Komo, H., Gkazaki, Y., Muramatsu, M., and Hayashizaki, Y.              |
| TITLE      | Normalization and subtraction of cap trapper selected contacto                   |
|            | prepare full-length cDNA libraries for rapid discovery of new genes              |
| J' : CENAL | Genome Res. 10 (30), 1617-1640 (2000)                                            |
| MET IN N   | 20499374                                                                         |

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JOURNAL MEDSTINE PUHMEDS

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/tissuc_lype="rembryonal carcinoma, cell line"
/lab_host="lbHlOW phage=resistant")
/lab_host="lbHlOW phage=resistant")
/site_2: Sall; Cloned unidirectionally; oliqo dT primed.
/Average insert. Size 2.5 Kb. Libbary enriched for full-length clones and constructed by Lite feedmonlogies.
Note: this is a NIH MGN_Library."
 Eukaryeta; Metazoa; Chordata; Craniata; Vertebrata; Enteleostomi;
 3337 AGTATAACCAIAIGALACTALCATACTIGAAACAGALITCAIAACTICAGAALGTAAAA 3396
 3.997 GAACTTACTGATTATTTTCTTCAACCAACTTATGTTTTAAATGA GGATTAITGAIAGT 4455
 cDNA Library Preparation: Lite Technologies, Inc. chwa Library Arrayed by: The L.M.A.G.E. Consortium (LLNL.) BNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 Mammalia: Entheria: Primates: Catarchin; Boninidae: Homo.
1 (bases 1 to 881)
NHH MAG http://mac.uci.nih.qow/.
NHOMAG http://mac.uci.nih.qow/.
Unational Institutes of Health, Mammalian Sene Collection (MGC)
Unpublished (1999)
 61 TTANACTCTCACCTCCCATGTTGCTCAAAGAACCAIATAAAACAGCTGTTATACCCATTA 120
661 TAGAAATTAG-AAAAAALIAGIAATIITAAAAALITAATIITATIITAATITAAAAATAA 719
 527 AAATGGAAGATGATCTGGTGATTTCATTTCAGTTAATGCTATGTGTCCTTGA-TATTTTA 586
 587 TITAAACTOTOGOOLOGOARGIIGOLOAAGAACAATALAAAAAGAGOOLOHAHADATHA 646
 SdP() :7
 1 AAATGGAAGATGATTTGATTTGAGTFAATGCTATGTGTGTGTGTGTTTTTTA 60
 24.5%; Score 844.8; DB-14; Length 881;
99.0%; Pred. No. 5.5e 154;
 Inde Is
 264 1
 Plate: LLAM13287 row: e column: 03
 U; Mismatches
 Contact: Robert Strausberg, Ph.D.
 /orqanism-"Homo sapiens"
 High quality sequence stop: 690.
Location/Qualifiers
 /db_xrel="taxon:9606"
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Tissue Procurement: ATCC
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 BQ220275.1 GI:20401675
 180.66
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 5', mRNA sequence.
BQ220275
 Matches 871; Conservative
 .881
 Homo sapiens
 Best Local Similarity
 313-а
 human
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 REFERENCE
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linear EST 05-FEB-2002
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 1907 CATTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACA TTTTTCATATGT CTTT 1364
 47 CIATAGACAGTITIGAAACACAGAGAACACCAGGAAAAAATAACCTIGATGAAGAGGTGA LOOK
 481 ATGTAATICCICCACACACICCAGTTAGGACTGTTATGAACACTATGCAACTAATGAA 540
 881 GATTATGCATTCAAAATTTTAGCAAACTTCTGAATGACCACATTTTTCATATGTTT R40
 chna Library Proparation: Life Lechanlagies, inc. charlibrary Arrayed by. The Lim.A.d.E. Consortium (LLNL.) BNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution can be
 827 GAIGTAALGGAGTTTPGAGAGGTTGAAAATGTTTPTAAAQGATAGGAAAAAATTTTTTTT 886
 401. CATCIAATGAATTFCAGAGGGTTGAAAATCFTFCFAAAGGATAGGAAGAAGTFTAFCFTA. 360
 501 GCACAGIGAATGCAAAASAAAGIATACIGAAAAGAGIGAAAGAGAIATAHAGAIAQAPTITIA 660
 661 AGGAGAATTTGCTAAAGCTGTGGGGGTTTGTGTGTCGGAAATGGATCAATGGATACGAAATAC
287 AGGIGAAAAATGIITATITGAAAAIIIIANAGGIIIIA1GAAHGIGIGGAGIIGIAA 826
 RIH MCC Lttp.//mgr er! rib grw/.
National Institutes of Health, Mammalian Gene Collection (MCC)
 HH7 AAAATAAAGATCTAGATGCAAGATTATTTTTGGATCATGATAAAACTCTTCAGACTGATT
 1365 ATTGGGGTGTGTTGAGGTTGTAATGGCCACATATAGC 1404
 III K NA
 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 1001 bp
 Email: egapbs remail.uih.gov
Tissue Procurement: ATGC
 BM475603.1 GI:18524645
 mRNA sequence.
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// issue_1ype_"cmbryonal carcinoma, cell line"
//issue_1ype "cmbryonal carcinoma, cell line"
//ab_bost="DH108" (phage=resistant)"
//note "Organ: lostis; Verior: pGWV-SPOFTE; Site_1. Noil;
Site_2: Sal; Cloned unidirectionally: olivo-di primed.
Average insert size 2.5 kb. Library enriched for full-length clones and constructed by iffe icchnologies.
Noice: this is a NII_MGC Library."
 974 PAPPANGAAAAAGTAAGGIIGAIGAAGGGGAATGTAATTOOTOGAGAPAGTGCAGTTA 1033
 554 ITCAGITAAIGCIAIGIGIIGACIAITIIAITAAAACICIGAGCIGCOAIGIIGAICA 613
 914 ITTTGGATCATGATAAAACTGTTGAGAGTGATGTATAGAGAGTITTGAAACACAGAGAA 973
 643 TITICHATCATAAAACTCTTCAGACTGATTCTAIAGACTTTTGAAACACAGAA 202
 703 CACCACAAAAAGTAACCTTGATGAAGGGTGAATGTAATTGCTCCACACACTCCAGTTA 762
 315 AGAAATTGATACCAGTACCAAAGTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 374
 43 ACTAATITGATACCACTACCAAACTTGATAATGCTATGTCAAGACTGTTGAAGAAGTATGA 102
 375 IGTATIGITIGCACICITCAGCAAAIT-GGAAAGGAGATGIGAACITATATTIGACAC 433
 434 AAPGCAGCAGCAGTTPPSATAPTGAAATTGTGGTTTGGTGCTAAAAGTTTGTTGGA 493
 614 AAGAACCATATAAAACAGCTGITATACCCATTAATGGIIGACCTGGAACACCCAAGGGGGG 673
 343 AAGAACATATAAAACAGTGTTATACCCAITAATGGTTCACCTCGAACACOGGGGAG 402
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 854 ATCTITCTAAAGGATACGAAGAAATTTATCTTAAAAATAAAGATCTAGATGCAAGATTA; 🤚 🛪
 523 ITATACCITITATGAAIIGICIIGGACIIGIAACAGCIAAFGGACIICCAGAAGIIGAAA 582
 37 Gaps
 164 ARCCCAGGAGTFGGATATCTACTGAAATAAATTCTGGATGGTGGTAAAAGTTTGTTSGA
 734 TICTCTCTAAAAAAACATGAATGTAATAIAGAGGTGAAAAATGITIAITICAAAAAIT
 | HELLITTETT TO A A A COME TO A COME A COME A COME TO A COME A CO
 Ouery Match 22.7%; Score 786, DB 13, Length 1001; Best Local Similarity 95.1%; Pred. No. 1.4e-112; Matches 833; Conservative 0; Mismatches 40; Endels 3,
 found through the I.M.A.S.E. Consortium/LDNE at: http://image.lbl.gov
Plate: LLAM12356 row: f column: U4
High guality sequence start: 17
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 "crganism "Homo sapiens"
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 Location/Qualifiers
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ATENCOTRIL 5505183 NIH_MGC_125 Homo sapiens cona clone IMAGE:5588245
 of three evalues, from females ranging in age from 38 to 49 ye. Labrary is olige-df primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert
 Zinde-"norman: Ovary (pool of 3); Vector: pCMV-SPORT5;
Site, 1: EroRV (destroyed): Site_2: Not1; RNA source pool
 size 2.1 kb, insert size range 1-3.5 kb. Elbrary is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 0.6."
 Eukaryola: Metadas Chordata: Graniata; Vertebrata; Enteleostomi;
1034 GGACTGTTATGAACACTAFCCAACTAATGATGATGTTTTAAATTCAGGAAGTGATCAAC 1053
 1094 CUTTAGAAAATCHSALII CTIAIIIIAACAACIGGACAGIGAATCCAAAAGAAGTAL 1151
 2542 ATTGAAGGAFGAGATGAAGGAGATGGAAGTAAAGATGTGGGGAGAGAGGGGAAATTGAG 2601
 16.4 GANTOLIA I GANTONIA MATANDA MATAN
 ctNA Library Preparation: Life technologies, Inc., ctNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) LNA Sequencing by: Appareourt Bioscience Corporation Clone distribution. MGC clone distribution information can be found through the L.M.A.G.E. Consortium/LLNL at:
 240 HOTAGATTETGAGAAGTTECAGAAAATAAATGAGATGGTATGTAAGAGGGAGGGTGTG 259
 National Institutes of Health, Mammalian Gene Collection (MGC)
 6; Caps
 Mammalia; Eutheria; Primātes; Catarrhini; Hominidae; Homo.
 21.8%; Score 752.4; DR 13; Length 1122;
95.6%; Pred. No. 4.8e-136;
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 2 others
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Tissue Procurement: Invitrogen
 Location/Qualifiers
1. .1122
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 RMS45881.1 GI:18778465
 http://imade.llul.gov
 د
180
 Unpublished (1999)
 5°, mKNA sequence.
BMS45881
 Conservative
 Local Similarity
 Rome Sapiens
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 h man.
 Matches 827;
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 HM545RH1
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 Poustka,A., Wellenreuther, k., Mewes, H.W., Weil, k. and Wiemann.S.).
EST (Poustka,A., Wellenreuther, R., Mewes, H.W., Weil, k. and Wiemann, S.).
 Eukaryota, Metazoa; Chordata; Praniata; Vertebrata; Enteleostomn:
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1 (bases 1 to 727)
 2722 STACACCTCTGGATTCATTGTCTCACACATCTGACTGTAACTTTTCCCACATTCTGT 2781
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 Contact: Poustka A.J.
 Department Lehrach
 Unpublished (1999)
 Homo sapiens
 AL597811
 AI.597811
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 DEFINITION
 ORGAN1SM
 AUTHORS
TITLE
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 VERSION
KEYWORDS
 REFERENCE
 JOURNAL.
 AL597811
 RESULT 8
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Ibnestrasse 73, 14195 Berlin, Germany

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German Genome Project.

No sl sequence available.

This clone (DKFYp31300816) is available at the KXPD in Berlin.
Please one and the PPPP Passeurcempenting. Herbackery 6, 14059
Berlin-Charlottenburg, GERMANY: Email: clone*rypd de
 /note-"Vector: pTriplEx2; Site_1: SfilA; Site_2: SfilB;
 This is the 5' sequence of the clone insert close trom S. Wiemann, Molecular Genome Analysis, German Cancer Research Center (PKF2); Frajl's wiemannédAL2- heidelberg.de; sequenced by DKFZ (German Cancer Research Center.
 Beidelberg/Germany) within the CDNA sequencing consortium of the
 18.3. GAAAICIAGGIGTTTGAGTGITTATAAAAAAGGGFATGAGAGGAGAAAAAAAAAGGGGT 1892
 2018 ANTIATGATGTTFFFATGTATGBOATATGFAAAFGAAGATATAGAGGTTAAAFTGAA 2072
 2133 TITGA LYAAACAAAAACACACUAN CATURONAWIYAKACOAUAUTGITAAACOGCICOOTOAGOGCA 2192
 ZELE GAAGALTIAIATELIGACCCCLGAAGAGTCCATATAAAATETCAGAAGGLCTGCCAAGACC 2372
 24.13 TGAGAAGTTFCGAGAAAATAAATCAGATGGTRATGTAACAGGGACCGTGTGCTCAAAAGAAG 24.92
 21.2
 2.19 * GAGACTGAAAACAAATATITTGCAGTATGCTTGCAAGGGGCGCGCTAGCTTGTCACGAAT 2252
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/db_yrof="+ayon-0606"
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 /lab host-"DHIOH"
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B80 kg ARNA linear BET 02 MAY 2002
BENEVOURT 756045 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:6041563
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 /note-Torgan: testis: Vector: pCMV-SPORT6; Site_1: Not1: Site_2. Sal:, Clored uniditectionally, vilgo di primed. Average insert size 2.5 kb. Library enriched for tull-length clones and constructed by Life Technologies. Note: this is a NHTMGC Library."
 Fukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.

 (bases 1 to 880)

cDNA Library Preparation: Lile Technologies, Inc. cDNA Library Arrayed by The T. M. A. R. Consortium (LLNL) DNA Sequencing by: Agencourt Rioscience Corporation Clone distribution: MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LAN. at: http://image.lin.gov.com.i.column: 20
 NIH-MGT http://mgc.nci.nih.gov/.
National Institutes of Health, Mammallan Gene Collection (MGC)
Unpublished (1999)
 376 CTATTGTTTTCACTGTTCAGCAAATTGGAAAGGACATGTGAACTTATATATTTGACACA 435
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 496 ACATITITATIAN TAANNANAANIANIACAAN NAAAGAIGAITITGEIGAIITICATIT 555
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 Contact, Robert Strausberg, Ph.D.
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 Location/Qualitiers
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98.7%;
 148 €
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 Homo sapiens
 Similarity
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 721 AGAIGAA 727
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 Query Match
 Local
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 Matches
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Eukaryota; Metazoa; Phordata: Craniata; Vertebrata; Euteleostomi;
 |RG5||O55|
| 6026||B48E| NIH_MGC_60 Home sapiens cDNA clone IMAGE:4737634 5''
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 HELLITHTHILLIT
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616. GAACCATAFAAAACAGCIGITATACCCATTAATIGGTICACCCGGAGGGGGAGGT 675
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 7.6. CTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTATTTCAAAAATTTT 795
 461 CTCTGTAAAGAASATGAATGTAATATAGATGAGGTGAAAAATGTTTA11TCAAAAATTTT 420
 856 CITECTAAACGATAGGAAAATITATGITAAAAATAAAAGATCTAGAAGAGATAITT 915
 ONA Sequencina by Incyte Genomics, Inc. Proceedistibution (A) Cone distribution: MGC clone distribution information can be
 NIE WEST BET DE ZONE OF THE LEAD OF THE STATE OF THE COLLECTION (MGC) Unpublished (1999)
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/lab host "DHIUH (TI phage-resistant)"
/note "organ: prostate: Vector: pDNR LiB (Clontech);
 cDNA Library Preparation: CLONETECH Laboratories, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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1. (bases 1-to-823)
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 Location/Qualitiers
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 USSUC Procurement: DCID/DDP
 BG610661.1 GT:13662032
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sequence: 5'-AIGTASABACGABASCGBCBA ALG OF (30)BN 6' (Where H = A, C, or G of and N = A, C, or O, or T). Average insert size 15 kb (range 0.9-4.0 kb), 44/E, colonies contained unserts by PCR. This library was enriched for full-length clones and was constructed by Contech Laboratories (Palo Alto, CA). Note: this is a NIH_MGC Library."
 2883 TATITATACAAGATIGAAAAACITGIGIAAAATCCTGCCATITAAAAAGTIGIAGAAATT 2942
 3123 TAGAAAATGTGTGTATGTTGGAATGGAATFTGALFGACATGGGTGTGTAAAAA 3182
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 361 GITICCTCTTCCAAAGIAAAAIIGCIGIGCIIIAIGAAIAAAAAAAGGGCCAAAAGGG 420
 661 ATTITACACCAT-TAGATICAATTACTALIGGAATCIGAIATACIGIGIGTIGTIG TTCA 717
 718 TAAAATTIGCTITAACIAACATACAAGGIGGAAGCAAAGTAT-AGGAIAIGAIATGA
 sdpp (6
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 2763 TAAQTITOSCAGGILOTGITTALGGGGACALLIAATATGILOAGTICITTILIGIGGATAL
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 20.2%; Score 699.6; DH 12; Length 823; 94.8%; Pred, No. 8.88 126;
 Indels
 3360 IACIACTGAAACAGAIIICAIACTCAGAAIGFAAAAGAACT 3401
 777 IACTATTIGAA - CAGALIGAIACCICAGAA (CLAAAGAAC) | H.E.
 , 4
 Pred. No. 8.8e 126;
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was primed with a Not1-oligo(d1) primer. Five prime end enriched, double-stranded cDNA was digested with Not 1 and econed into the Not 1 and Eco RV sites of the PAVSPORT 6 vector. Library was normalized. Library was constructed by Lite Technologies. Contact : Find Library
 by Lite Technologies. Contact: Fend Liang Lite Technologies, a division of Invitrogen 9800 Medical Center Drive Workyille, Maryland 20850, USA Pax: (1) 391 610
 EST 16-FFB-2001
 Anothe-"Organ: brain; Vertor: prMVSPOPT 6: 1st strand opNA
 Eukaryola: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi: Mammal.ia: Eutheria: Primates: Catarrhini: Hominidae: Homo. 1 (bases 1 to 792) Li.W.H., Grubor, C. Losson, J. and Polayes.D.
 ALS64757 LTI_NFL031_NRC4 Homo sapiens cDNA clone csOppOnTYA05 3
 384. AAGTAAGGTTGATGAAGGGGTGAATGTAATTCCTGGAGACTGGAGTTAGGGGGAGGAGTATTAT. 1043
 6.24 IAAAACAGTGIIAIACCCATTAAIGGTTCACCTCGAACACCCAGGCGAGGTCAGAACAG 683
 73.2 TAAAACAGGTKIFATACCCATTAATGGPFFGGAAGAGGAGAGGGGGGGGGGAAGAGGG 733
 184 GAGTGCAGGGATAGCAAAACAACTAGAAATGATACAAGAATTATTGAAGTTGTGTGAA 743
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 52 AGGATAGGAAGAAATTTTTCTTAAAAATAAAGATCTAGATGCAAGATTATTTTGGWTCA 493
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 Email: segrefagenoscope.cms.fr, Web . www.genescope.cms.fr.
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20.2%; Score 598.2; BH 9; Erngth 792.
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Matches 23, Indels 3, Indels 3.
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 Full-length cDNA libraries and normalization Unpublished (2001)
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 prime, mRNA sequence.
AL563757
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/lab_host=holloB (TI phage-resistant)"
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Sfil (ggccgcctcggcc): Site_2: Sfil (ggccattatgcc): 5' and
3' adaptors were used in clouing as follows: 5' and
c, or G and N - A, C, (, or T): Aperage insert stee B - A,
C, or G and N - A, C, (, or T): Aperage insert stee L;
Eb (raige 0:E 1:2 Et): L'2/5 colouics contained inserts
by PCR: This library was enriched for full-length clones
and was constructed by Clontech laboratories (Palo Alto,
CA): Note: this is a NIH MGC Library."
 Eukaryoka, McLanda, Chordata, Craniata, Vertebrata, Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 767)
 1044 GAACACTATCCAACAATTAATGATTTTTAAATTCAGCAAGTGATCAACATCAGAAAA 1103
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 BGD/0425 Timear EST lu-APR 602913.PEL NIH_MGC_77 Homo sapiens SDNA clone IMAGE:4717874 5
 Physics organization of the control
 372 GGACAYIWFCCAACAAIIAAIGAFGTITIAAAFTCAGCAAGTGFFCAACCTICAGAAAF 514
 252 GAAGGATWTKGGATACWTYTTTAAAGAGAAATTTGCTAAAGCTGTGGGGACAGGGTTGTGT 193
 NiH-Mar http://mqr/ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
 312 IYIĞITITICYIMITTITIACGACIGÇAÇAĞI'GAATÇCAAAAGAAAGIATACIGAAAAGACI
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 Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
 3322 AAAAGCTGGAAAGCAAAGTAFAAGGATAGFAFGATAGFACTGAAAGAGATFFCATA 3381.
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 1083 AALFFALATGTALGTELLLAAFTTAACATGAACGCTTAGAAATGTGTGCCTATCTA 3142
 266 * GONTOGATACHTCANACHANGKANGANANTGAGATOTONGAGACHTGGTGGACACHTGGTGTGT
 2723 TAPAPPER BRATIFICATION OF CONTROL AND ARCHITCH AND THE FORMAND TO STAND
 284 5 TITGGGTGATFCCTAAGCCAGTTGAAATGTTAGTCATTGTTATTATACAAAGATTGAAAA 2902
 114.3 FOLFOMAALGCAALITGALLGACL-GCCCALTCACCAAAATTATGCTGAACTGTTGTGC 3201
 1202 AAAAATGGATATTAFTAGAAATTAGAAAAATTAGTAATTTAAGTATTTAGATTAGATTTATT 3261
 IZ62 HACTALIGGAALCIGATALACIGIGIGGI IGIJ HAJAAAATTI IGGIJ HAATTAAAL 3321
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 601 ITACTARGGAATCTGAIATACTGTTGTTGTTGTTAIAAAA 1116031FTAATTAAATT 659
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 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 20.0%; Score 692.2; DB 12; Longth 767; 97.1%; Pred. No. 2.4c-124; ative 0; Mismatches 18; Indels 4;
 3382 GOTOAGAAFGE AAAAGAAOTTACTGATTAFITIGITGATCCAACTTAT 3429
 719 OCHORGAARGIGIAARGKAACHAGIIGIIIIA HIIIIIIII 1811 767

 (bases 1 to 972)
 NIB Mot bitp.//max.mci.nih.gov//.

 BM466194.1 GI:18515236
 Matches 747; Conservative
 mENA sequence.
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//ab bost="myHow (phage-resistant)"
//note="organ: testls; Vector: pCMV SPORTE: Site_1: Note:
 Average insert size 2.5 kb. Library enfiched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
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 2779 TGTTFALGGGGGGGALTAAFALGEGGGGGGTTTTTGTGGGATATAAAAGGTGTAAAA 2838
 3139 TCTATCHTCCAAATGCAATTIGATTGACTGCCCATTCACAAAATTALCCTGAAATTC 419B
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 241 AFTGTFFGGGGGATTCCTAAGCCACTICAAATGTFATFGTFATFGTTATATATATG 309
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National Institutes of Health, Manmalian Gene Collection (MGC)
Unpublished (1999)
 2899 AAAATCTTGTGAAATCCTGCCAITIAAAAAGITGTAGCAGALLGIILGCTCTTCCAAAG
 eDNA Library Preparation: Lite Technologies, 15c. cbNA Library Arrayed by: The L.M.A.G.E. Consortion (LLNL) DNA Sequencing by: Agencourt Bioscience Curporation
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 DB 14; Lemath 972;
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 3
 20.0%; Score 691.8; DB 1%; illarity 96.7%; Pred. No. 2.8e-124; Conservative 0; Mismatches 19;
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 Vactor: pCMV-SpOpT6: Site_1: NotT;
d unidirectionally, Primer: Oliqo dT.
2 kb. Library constructed by Life
 Eukaryola: Metazoa: Chordata: Craniata: Vertebrata: Euteleostomi;
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3. 9. FROAAAATGGATATTATTAGAAATTAGAAAAATTACTAATTTTAGACATTAGATTTT 3258
 (259 ALLITACIALIGGAAFOTGAFATAO 0376----PGOTTGTTTAAAAAPITTOOTTTT 3313
 1360 ACGATETRAACATCEAAATCATERAAATCCTTGCATGACTCTCAGAATDACTHAELGAA 1519
 16.20 10.11ATHAAAGAAFGAAAGGAGGGAGAAGTGATGAGGTTGAAFGFGTTGTG 1679
 1740 ATCTCCAAAGAAAAAAAGGTTGAACTACGCTGTAAATTCTACTGGAAATGGAAAAGAAACACA 1799
 1680 TOTIANTOTICOTOCOGRANIANTOACAGGGAGCAGAIAIGHIOTOCOGGIANG 1739
 cDNA Library Preparation: Life Technologies, Inc. chNA Library Arrayed by: The L.M.A.G.E. Consortium (HLNL) INA Sequencing by: Adenount Bioscience Corporation Clone distribution: MRC clone distribution information can be
 1 (bases 1 to 835)
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 13 ACCATATAAACATCAAATCATGGATGGGTGGGGGGGTGGAGATTGACGTTTATTTGA 72
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ilarity 100.0%; Pred. No. 1.4e-121;
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 4314 AATTAAAIAAAAGCT-OGAAGCAAAGTATAAGG 3345
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Mammalla, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 672)
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603392330P1 NIH_WCC_90 Home sapiers comA clone IMAGD:5102022 57
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 Homo sapiens
 human.
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tull length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
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SOURCE Mus muscritus (strain.CS7)

Mus musculus (strain:C57BL/61) 10 days embryo cbNA to mkNA, clone\_lib:RIKEN full-length enriched mouse cbNA libraty musculus musculus.

ORGANISM

Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Enteleostomi, Mammalia, Eutheria, Rodentia, Sciuroquathi, Muridae, Murinae, Mus

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 Adachi, J. Aldawa, K. Akahira, S., Akimura, T., Abno, H., Arai, A., Atakawa, I., Baldarelli, R., Bono, H., Bremastein, M., Hult, C., Cardine, P., Pukunishi, Y., Furuno, M., Hanadaki, J., Hara, A., Hayarqua, S., Fukunishi, Y., Furuno, M., Hanadaki, J., Horri, F., Hume, D., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Fashia, Y., Kopina, Y., Konon, H., Kouda, M., Koya, S., Kato, H., Kanai, J., Kojina, Y., Kopina, Y., Konon, H., Kouda, M., Koya, S., Kuthara, C., Matayama, T., Miyadaki, A., Nishi, K., Namaraki, K., Ohno, M., Okazaki, A., Okido, T., Owa, C., Ouackenbush, J., Saito, H., Saito, R., Sakai, K., Sahada, K., Shinadawa, A., Shiraki, T., Solahe, Y., Sulada, M., Takahashi, F., Tanaka, T., Toya, T., Yamamura, T., Yamanaka, I.,
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 Functional annotation of a full-length mouse cDNA collection
Nature 409 (6821), 685-696 (2001)
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Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of

Yasunishi, A., Yoshida, K., Yoshino, M., Muramatsu, M. and

Hayashizaki,Y. Direct Submission

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Genomic Sciences Center and Genome Science Laboratory in PIKEN.
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Mammalla: Eutheria: Primates: Catarthini, Hominidae, Homo.
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cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL)
INA Sequencing by: Agencourt Broscience Corporation
Clone distribution: MGC clone distribution information can be
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 MIH Mest for p_i \neq p_i (n, r_i) in the even National Institutes of Health, Mammalian Gene Collection (MGC)
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Emoll: cqapbs Pamall.nih.gov
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 This is the 5' sequence of the cione insert
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 Department Lebrach
Max:Planck-Institute for Molecular Geneties
 Email: poustka≅mpimq-berlin dahlem.mpq.de
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 Thnestrasse 73, 14195 Herlin, Germany
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Fax: +49.30-84141128
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 No st sequence available.
This clone (DKFZp31300816) is available at the KZPD in Berlin. Please contact the KZPD. Kessourcenzentium, Heubnerweg 6, 14059 Berlin-Charlottenburg, GERMANY; Email: clone@rzpd.de.
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 62 AGACTGAAAACAAATITTGAAGATAHHHHHHHHHHHHHHHHHHHHHHHHH
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 nad itottovalThrataTyrtysAsptonOroHisAlaValCipCluThrDbotysArgVal 799
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 124 ValleuFheAlaLeuFheSerLysLeuGluArgThrCysGluLeuIleTyrLeuThrGlu 143
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 cDNA Library Preparation: Life Technologies, the, cDNA Library Arrayed by: The L.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can be round through the L.M.A.G.E. Consortium/LLNL at:
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 Mus musculus
Eukaryota; Metakoa; Cherdata; Craniata; Vertebrutu; Euteleostomu;
Mammalia; Eutheria; Rodentia, Sciuroquathi; Muridae, Murinae: Mus
 Email: mouscest@watson.wustl.edu
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IMAGE Consortium (info@image.llnl.gov) for further information
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 302 IATAAAATTTCAGAAGGTCTGCCAACAACAACAAAAATGACTCCAAGATGAATTTA
 4444 Förest Park Parkway, Box 8501, St. Louis, MC 63108
Tel: 314 286 1800
Fax: 314 286 1810
 980 LysqidelysMet AshAepSeiMetAspThrSeiAshLysGludlulys 895 HIIIIIIIIIIIIIIIIIIIIIII 602 AAGCAGAAAAIGAAIGAAIGAAIGGAIAGGAIGGAIAGCICAAACAAGGAAGAAA 649
 /db_krei-"taaon:10090"
/clone-lib/scares_mammary_jland_HMLMG"
/scar female (lactating)"
 WashU-HHMI Mouse EST Project
Washington University School of MedicineP
 Seq primer: -28ml3 rev2 ET from Amersham
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Apply Index 1 pt7t40-Pac (Pharmacia) with a meditied polytimker; ist strand cubw was prepared from mammary dand tissue from a lactating formacie, and was then primed with a Not 1 - Oilgo(dl) primer. Doubler-stranded cubw was liquated to Fee RI adaptors (Pharmacia), dispessed with Net 1 and cloned into the Not 1 and Eco RI sites of the medified pt7t3 vector. Library is normalized. Library was constructed by Netto Soares and M. Patima Honaldo. "178 c. 217 q. 261 t. Lothers."
 | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET | FEET |
 423 ValMetGluSerMetLeuLgsSerGluGluGluGluArqLeuSerlleGlnAsnPheSerLys 442
 442 OPTAPOTATAGRADAMIAGATTORAGRAFOTTOTOGAACAGATTOTOCOFTCCCG 383
 40 FPGLEUASPHISASPLYSThrLeuGlüfhrtAspScriftcAspScrPhcGlüfhrGlüArg 322
 914 HITTEGATGCAGAATAAAGGGGGGGGT--TGGTTTAGGGGTTTTTAAAGGGGGAG 857
 324 Thr ProArq Lysson Asniou Asptinctio Val AsnVal HoproproHist by proV41 - 342
 44. ArgThrValMetAsnThrIleGInGInLeuMetMetIleLeuAsnSerAlaSerAspGIn 362
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 46.1 ProserGluAsnLeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerfle 382
 7.47 COCCEDAGAATNEGIGTT-1CCCICCECTAATATTGCGGGGGAGAACCCCAAAGAAATTCCC 679
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 404 GlocilyCysValcitatioGlySerGinArgTyrLysLeuGlyValAr4LeuTyrTyrArg 412
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 463 AlaThrIyrSerArgSerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPhePro 482
 503 lletysaladlustyasnizuthratigiumetiletyshisteudluargeysdiuHis 522
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Mismatches:
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Matches:
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1 3  $\frac{2\pi}{3}$  524 ArgileMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLysGln 542 26.2 COAALCATGGAATGCCTTGCATGGCTTTCAGATTCACCTTTATTTGATCTCATTAAGCAG 203 54.1. SerttysAspArgGluGlyProtbrAspHisLeuGluSerAlaGysProteuAsni.eupro. 562 

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Anote Tagain Eduli, Vector: priMVSPoRT 6; 1st strand cDNA was primed with a NotLolino(41) primer. Fire prime end contributed, double stranded cDNA was discussed with Not I and coloned into the NotLoland Eduly was constructed vector. Library was normalized. Library was constructed by Life Technologies, Contact: Ford Library was constructed brite Rockville, Maryland 2005; USA Fax: (1) 801-610 Brive Rockville, Maryland 2005; USA Fax: (1) 801-610 Brtp://tullengbh.nviltogen.com//
 AL563757 AL5LNELO01_NBC4 Homo Sapiens chNA clone (SubpondYAO) 4
 Homo sapiens
Eukaryota: Metazoa; Chordata; Cianiata; Verrebiata; Euleleostomi;
 227 Seralaargilealalysolmicachuashasphharathecheolavath m/yshys 246 [HILBERT HI] HILBERTHILL HILBERTHILL
 731 AGTGCACGGWTAGCAACACYAAYTAGAAATTGALACAAAATTATTGAAGTTCLCTGLAAA 672
 583 LysolyserThrThrArqValAsnSerThrAlaAsnAlachathrChaAlachaCorAla 56.2
 563 LeuGlaAsnAsnHisThrAlaAlaAspMetTyrLeuSerPrOValArqSerProAsLys 582
 207 EysThrAlaVallleProfleAsnGlySerProArqThrProArqArqSlyGlnAmArq 226
 Email: seqref genoscope.cms.fr. Web : www.qenoscope.cms.fr.
Location/Qualifiers
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 1 (bases 1 to 792)
Live B., Griberte, Jessec, d. and Palayes, D.
Pull Henrith chem. Thrantes and normalization
Unputalished (2001)
 /tissue_type "neuroblastona cells"
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 Zelone lib-"LHT_NFL001 NBC4"
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 BP 191 91006 EVRY cedex - France
 US-09-026-459A-29 (1-895) x AL563757 (1-792)
 Gaps
 603 PheGlinthrGlintysProLeutys 610
 "DH10B"
 25 TTCCATACTCAGAAGCCATTGAAA 2
 AL563757.1 GI:12913464
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Am Klopterspitz 18a D-82152 Martinsried, Germany
This is the 5' sequence of the clone insert
Clore from S. Wiemann, Molecular Genome Analysis, German Cancer
Research Center (DRY2): Final S. Wiemann Addrz- heidelberg der,
sequenced by BMFX. (Biomedical Research Center at the Charite,
Berlin/Germany) within the cDNA sequencing consortium of the German
 EST 14-AUG-2001
 Homo sapiens
Hokaryota: Metaroa: Chordata: Craniata: Vertebrata, Buteleostomi;
Hammalia: Bolberia: Primales: Catarrhini: Hominidae: Homo
1 (bases 1 to 605)
411 YIGITTICYIWITTI'ITACGAC'IGCACAGIGAATCCAAAAGAAAGIAI'ACTGAAAAGAGIG 252
 107 31911 of 17SerClnArgTyrLysLevGly--ValArgLevGTyrTyrArgValMetGlus 426
 ASPLYSTMILEUGIOTHIASPSerIleAspSerPheGluThiGlnArgThiPicArgLys 326
 427 SerAsnleuAspGluGluValAsnVallleProProHisThrProValArgThrValMet 346
 251 AAGGATWTKGGATACWTYTTTAAAGAAAATTTGCTAAAAGCTGTGGGGACAGGTTGTGTT 192
 191 GAAATTGGATCACAGGGATACAAACTTGGTTTTGGCTTGTATTACCGAGTAATGGAAT 132
 426 erMetLeuLysSerGluGluGluArgLeuSerIleGlnAsnPheSerLysLeuLeuAsn- 445
 4.6 AspAsmilePheHisMetSeri.cui.cuAlaCysAial.euGluValValMetAlaThrTyr 465
 EST (Kochtor,K., Boyor,A., Mowes,H.W., Weil,H. and Wiemann,S.)
Unpublished (1999)
 297 ArgiyrdindinileTyriculysAsniysAspicuAspAlaArgicuPheicuAspHis 306
 owere Clares and Squeezer Here) Home saptems abus electioned DKF7pll3P092-5', mkNA sequence.
 447 AsmiltrifeGinGinLeuMethAttieheuAsmSerAlaSerAspGluProSetGluAsm
 4-7 LeulleSerTyrPheAsnAsnCysThrValAsnProLysGluSerIleLeuLysArgVal
 4.3.L. AGIAAGCITGWIGGAGAGAGTGAATGIAATITOTIOTACACACACAGITAGGAYIGITITG
 Koehrer, K., Beyer, A., Mewes, W., Well, B. and Wiemann, S.
 Linear
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 605 bp
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/db_xrei-"taxon:9606".
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No al sequence available.
This clone (DKFZp313F092) is available at the RZPD in Berlin.
P'ease contact the RIPD: Researcenfortrum, Houbnerwey 6, 14,59
Berlin-Charlottenburg, GERWANY, Email: clone#rzpd.de.
 121 GAAAATCTTTCTAAACGATACGAAGAATTTATCTTAAAAATAAAGATCTAGATGCAAGA 180
 362 GLOST Set Strasilier treetty: Pleasabasecystyrustassification 181 HTTLL HT
 282 GluAspLeuSerLysArdTyrGluGluIleTyrLeuLysAsnLysAspLeuAspAlaArg 301
 322 ArgThrFroArgLysSerAcaLeuAspGluGluValAssValileProProHisThrPro 441
 402 GlySlnSlyCysValsly:156SlySerSlaAraIyxLysLeuGlyValAraIcwTyrIyr 421
 481 GGACAGGGTTGTGTCGAAATTGGATGAGGGAIACAAAGTTGGAGTTGGCTTGTAGTAGGS
 422 ArgValMeteluSerMetlesiysSerGluGlsGlsArgleuSea HeGluAsuPhaser 441 HHHHHHHHHHHHHHHHHHHHHHHHH
 541 CGAGTAATGGAATCCATGCTTAAA1CAGAAGAAGAACGATTATCCATTCAAAATTITAGC 600
 1 GAAGTICTCTGTAAAGAACATGAATGTAATATAGATGAGGTGAAAAATGTTTATTTCAAA 60
 342 ValArgThrValMetAsnThrIleGluGlnLeuMetMetIleLeuAsnSerAlaSerAsp
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 Mismatches:
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 Matches:
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 Gaps:
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Zubio. "origin: breast: Weetor: pur18: Site_1: Smal; Site_2: Smal: A mini-library was made by closing products derived from ORESTES PCF (H.S. Letters Patent application No. 196
 Natai.M.A.: do Silza.W. Jr., Zago.M.A., Bordin.S., Costa.F.F.,
Cooldman, G.H., Carvallto.A.F., Mats.Winna.A., Baia./S., Simpson.b.H.,
Brunstein.A., derivitian.P.S., Burther.P., Jongeneel.C.Y., O'Hare,
M.J., Soares.F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
 This sequence was derived from the PAPESP/Live Homan Cancer Genome. Project: This entry can be Seen in the Tollowing URL (http://www.linear.org/priscripts/?gethinly_plaif.wr.p.Et_Ribe4_2]0_200_014_e06at+2000_02/21At4+1)
 EST 12-JUN-2000
 oias Neto,E., Garcia Correa,R., Verjovski Almeida,S., Briones,M.R.,
 PTZ BT0642 210200 014 +005 BT0642 Homo Sapiens CDNA, mKNA Sequence.
 ,716 - Ludwiq Institute for Cancer Research) profiles into the pUF 18 vector. Reverse transcription of tissue mKNA and cDNA amplification were performed under low
 Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria: Primates; Catarrhini; Hominidae; Homo.
1. (bases 1-to-694)
 Shotqun sequencing of the human transcriptome with ORF expressed
 For Prof. Antonio Prudente 109, 4 andar, 01509 010, Sao Paulo-SP.
 557 TACAAACTIGGAATTOOGGI IGIATTACOGAGTAATGGAATCGATGAATGAAAAAAA 498 🕆
 676 PACH GCACACAL GCAAAAGAAAGHATAGHGAGAAGAGGAHATAGGAHACAFC 618
 994 PhotyaclatyaPhatyaAlaValGlyGlyGlyGValGluIlgGlySerGlnArg 412
 474 AppCysTtrValAppProtystl GerIletatysArgValLysAspIleGlyTyrIle 392
 617 TITAAAGAAATITGCTAQQCTGTGGGACAGGNTTGTGTCGAAATIGGATCACAGCGA 558
 Proc. Natl. Acad. Sci. 5.5.A. 97 (7), 3491-8496 (2660)
 1 others
linear
 Conservative:
Mismatches:
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 Laboratory of Janeer Jeneties
Endwig Institute for Caneer Research
 Matches:
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 US 09:026 459A 29 (1 895) x BE082846 (1-694)
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 Seq primer; pur 18 forward
Migh quality sequence start; 58
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 Email: asimpson fludwig.org.br
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 127
 Contact: Simpson A.J.G.
 BE082846.1 01:8473151
 DOI: 100
 Fel: -55 11 2704922
Fax: -55 11 2707001
 1030,00
 96,44%
94,95%
 871.77
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 Sequence fags
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 Simpson, A. J.
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Anotes Weetor: pl7180-bac (Pharmacra) with a modified polylinker: 1st strand CDMA was prepared from mammary gland tissue from a lactating formals, and was then primed with a Not I — olimedIJ primer: Double stranded cDMA was ligated to Eco RI adaptors (Pharmacla), dispessed with Not
 EST 29 APR 1999
 Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
 Mus muscullus
Enkaryota: Metazoa; Chordata; Cramiata, Vertebrata, Enteleostomi;
 1 (bases 1 to 832)
NCL-CGAP http://www.ncbi.nim.nih.gov/ncicqap.
National Caneer Institute, Caneer Genome Anatomy Project (CGAP),
 This clone was previously sequenced on the 5' end only, this new data is from the 3' end
 This clone is available royalty free through LLNL; contact the IMAGE Consortium (into dimage.llnl.gov) for further information.
 473 LeuAspSetGlyThrAspLeuSetPheProTrp11eLauAsnValleuAsmLeuLysAla 492
 513 MetillelysHisLeuGluArqCysGluHtsArd(LeMetGluSerLauAlaftEplenSer 532
 533 AspSerProteuPheAspLeu11etysGluSerTysAspArqGluGTyPteLDrAspH1s 552
 553 LeuGluserAladysProLeuAsnLeurFroLeußlaAsnAsnHisThrAlaAlaAspMo-572
 453 LeuteuAlaCysAlateuGluValValMetAlathrIyrSerArqSerThrSerClnAsn 47z
 A1646038 bitcoit EST 29 APR VW54016.xi Soares,manmary_diada_NNLA68 Mus massedlus cbNA clone IMA08E1247610 f similar to db.MZ6.vi Mouse retinoblastema succeptibility protein (MOUSE);, mENA sequence.
 4.3. GluArqLeuSerlletlnAsnPheSerlystenLeuAsuAspAsnIlePhellisMetSer
 572 tTyrLouSerProValArqSerProLysLysLysGlySerJhilliAiqVal 689
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idlhobyl Human Pancreatic Islets Homo Sapiens characteric MAKE-2012 MAKE-2012 MAKE-5038049 5' Samilar to gb:MIS400 RETINOBLASE-MA-ASSOCIALED PROTEIN (HUMAN); gb:M26391 Mouse retinoblastoma susceptibility AMS83181
 Bulkaryota, Metazoa, Chordata, Cranzata; Verrebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 623)

Melton, Meadows, A., Clifton, S., Hillier, I., Marra, M., Pape, D., Wylic, T., Martin, J., Blistain, A., Schmitt, A., Theising, H., Ritter, R., Fonko, T., Hominett, J., Cardenas, M., Gibbons, M., Mcann, R., Colo, W.R., Tsaqarelshuli, R., Williams, T., Jackson, Y. and Bowers, Y. Golo, Washi, Harvard Poncreas EST Project
 Email: dmelton@biohp.harvard.edu
Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Wishington University Connew Sequencing Center
 For information on obtaining a clone please contact: Juliana Brown
 Site_2: Sull: Library constructed using SuperScript Plasmid Library kit (Life Technologies), cDRA made by olive of Friming. Site: Attected by column fractionation; unamplified."
 Endocrine Pancreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
 (brown@tas.harvard.edu)
This sequence now_available from the IMAGE consortium, for clone
 /hote "Organ: Pancreas; Vector: pSPORFT; Site_1: Not 1;
 259 ValTyrPhoLysAsnPhoTloProPhoMctAsn·SerLeadlyLeaValThrSerAsnGl 277
 277 yLeuProSluValGluAsnLeuSerLysArgTyrGluflulleTyrLeufynAsnLysAs 297
 3 ACAAGATTATTGAAGTTGTCTGTAAAGAACATGAATAATATAGATGAGGGGGGAAGAT 62
 Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
 1 others
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/clone=lib="Human Pancreatic Islets"
/lissue=Lype="Islets of Langerhaus"
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/lab_host="DH10B"
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High quality sequence stop: 430.
 Gaps:
 /db_xref-"taxon:9606"
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 Tel: 617-495-1812
Fax: 617-495-8557
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/note-"Vector: pI7T3D Pac (Pharmacia) with a modified

/lab\_host-"DH10H"

/clone\_TBAGE:1247665"
/clone\_lib="Soares\_mammary\_aland\_NMLMG"
/sex="temale (lactating)"
/tissue\_type="mammary\_gland"

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w54bolin Source, mammary quand. NMLMC Mus musculus craw close
IMAGE:1247655 5' similar to gb:M15400 RETINGHLASTOMA-ASSOCIATED
PROTEIN (HUMAN): qb:M2651 Mouse retinoblastoma susceptibility
A7764485
 Marra, M., Hiller, L., Allen, M., Howles, M., Dietrich, N., Dubugue, L., Garsel, S., Kuedba, L., Lary, M., Lar, M., Martin, J., Morris, M., Schellenbry, K., Steptono, M., Ennon, K., Moore, B., Theising, B., Wilson, R., Moore, B., Theising, B., Wilson, R., and
 Mammalia: Butheria; Rodentia; Sciuroquathi; Muridae; Murinae; Mus.
1 (bases 1 to 871)
 Bukaryota: Metazoa: Chordata: Craniata; Vertebrata: Buteleostomi:
 this clone is available royalty-tree through HAML; confact the MAGE consortiom (info)image.llnl.gov) for Durther information.
 417 rPhoGluffurGinArqThrProArqLysSerAsuLeuAspGluGluValAsuValIlPPr 337
 937 oProHisThrProValArgThrValMetAshThrIleGlnGlnLeuMetMetIlleLeuAs 357
 303 TOTALACACTORAGITAGGACIGITATGAACACITATGCAACAATTAATGATTITAAA 362
 4.2.4. TOOAAAAGAAAGTATACDGAAAAGAGTGAAGGATALAGGATACATOTNEAAAGAGAATT 482
 417 lArgLoulyrlyrArgValMetGluSerMetLeuLysSerGluGluGluArgLeuSerll 437
 124 ACTICCAGAGGTTGAAAATGTTTCTAAACGATACGAAGAAATTTATGTTAAAAATAAAAA 182
 297 ptenAspAlaArdtouthotouAspHtsAsptysThrttouGfnthrAspSortfeAspSo 317
 357 nSerAlaSerAspOlnPreSerOlnAsnLeufleSerTyrPheAsnAsnCysThrValAs 377
 37 introtyactusorthetortysArqValiysAsqribotygyrthetystysctusysph 397
Indis, Michigan
 Washington University School of MedicineP
 · 28ml 4 rev2 ET from Amersham
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Location/Qualitiers

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FEATURES

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polylinker; ist strand cDNA was prepared from mammary dated tissue from a lactaling townste, and was then primed with a Not 1 - oliqo(dl) primer. Double-stranded cDNA was ligated to Boo NI adaptors (Pharmacha), discisted with Nit I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is negmalized. Library was constructed by Bento Soures and M. Falina Bonaldo. "
 402 lyglaclycysValGluileGlySerGliAraTyrLyaLeuclyValAraLeuTyrTyrA 422
 542 Insertysasparagludtyprothrasphistandluseralafysprofeuashtaap 562
 323 ThrProArgLysSerAsn LewAspGluGluValAshVallleProProHisThrProV 442
 462 InProSerGluAsnLeatTeSerTyrPheAsnAsnCysThrValAsnFrotysCluSerT 482
 744 GCCCATCCGAAAATCTIGITCCCIGCTCCATATGGTCCCGTIACTCCAAAAAAAAATC 685
 382 letoutysArgValtysAspileGlyTyrflettetysClutysficAlutysAluValG 402
 684 FCCTAGGAGCT1AAAGG11GFC1GCCG4CCCT11AAAAGAGAGGCTFTTAAAGACTG1GG 625
 624 GCCAGGGCTGTGTGACATGGGAGTACAGCGATATACATTGGAGTCCGALLGTATTACC 565
 422 rqValMetGluSerMetJaullysSerGluGluGluArdLauserTleGluAshPheser1, 442
 442 ystouteuasnaspasmilePheHisMetSerfruiznaldCysaldizuSinValValM 462
 502 hellelysAlaGluGlyAsnLeulhrAraGluMetilelysBisLeuGluAraCysCluH 522
 522 isArgileMetGluSerLeuAluTrpLeuSerAmpSerProLeutheAmpLeuflelyse 94.z
 342 alArgThrValMetAssThrIleGlnGlnLeuMetHleLeuAsnSerAlaSerAspG 362
 803 TIGG-GOOGITETIGALANTACTOCACMATTAGGGGGTIIITAAII LOOMAAGTALOA 245
 860 AGCCCAAGGAAAAACAAGGCCTTGGGAGGGGGCAAGGGGTTTTAGGCCCTAGAI
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|               | 125          | ::<br>:::      | C+<br>C+                 | ć              | ALC97811                                       | ALCO7811 DKFZp 41 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|               |              |                | 1464                     | Ξ              | AK011246                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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|               | 8            |                | 1023                     | <u> </u>       | HM4 500 41                                     | BM450031 AGENCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|               | Ξ            | 26             | 914                      | ۍ ۱            | AA76 4411                                      | AA 26 3411 VW54404.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|               |              | 26.            | 79.5                     | . می           | ALS6 47 57                                     | ALS6.3757 ALS6.4757                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|               |              | 2 0            | 504<br>504               | . د            | AL599644                                       | ALS 996 44 DKEZp 41 4F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <br>c         |              |                |                          | 0 0            | BE082846                                       | BEDRIZHA6 RCZ BIO64                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|               | 9101<br>1010 |                | 5.2.3                    | _ ;            | AW383181                                       | AWS# (HELL Dall Hest, y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <br>U         |              |                |                          | , :            | AA/63485                                       | AA (4,5485 VW54h01.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ٦-            |              |                | 10                       | 15             | 1365 L. C. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| ٠.            |              |                | 0 T V                    | , ,            | AV2156.44                                      | 1311-31-568 602315634<br>AV216634 AV316634                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| C1            | 6            |                |                          | ٦              | AE692790                                       | ALCG2790 DKI2D4141                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ୯୩            |              |                |                          | 7              | BE539278                                       | MIN 35278 60106356                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| C.I           | 8            |                |                          | œ              | AL120941                                       | AL120941 DKFZp76ZD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| C-1           | 879          | 61.5           |                          | ~              | B1526982                                       | B15.26982 602927177                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| one<br>S      | <b>x</b> 0 « |                |                          | ~ ·            | BL 431236                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| 4.0           | n            | 7.00           | ಖ ್<br>ಫ್ ಫ್<br>ಖ ಇ      | <b>→</b> ←     | MM 4704 LG                                     | ISMARUGATO POPZIDIPKO<br>AMPORANGA ITTERE PANO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| , gr          | 20           | 20.3           |                          | ;<br>1 J       | AA072780                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ~             |              | 6.6            | CA                       | ~              | BM456728                                       | BM456728 ACHNCOURT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| CT:           | 7            | 18.7           |                          | 10             | AW503514                                       | AW503514 U1-HF BN0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| er<br>U       |              |                |                          | ैं             | BF827047                                       | BI'827047 RC3 HNO02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| ~ /           | G .          | 16.4           | 287                      | 2              | AW951604                                       | AWY5 ] 6.04 FS J 46.46.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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|               | 7 CO(3       |                | - C<br>- d               | r 3            | A1745645<br>A1564105                           | A16 50106 102000 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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|                        | 1051 bp mRNA linear EST 20 FEB 2002 | AGENCOURT_6566134 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:5550905<br>57, mRNA sequence. |           |                        |          |        |              | Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, | Mammalia: Butheria: Primates: Catarrhini: Hominidae: Homo. |                     | nih. dov/.                       | National Institutes of Health, Mammalian Gene Collection (MGC) |  |
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|                        | BM561083                            | AGENCOURT_6566133 NIH_1 5', mRNA sequence.                                               | BM561083  | BM561083.1 GI:18806043 | EST.     | hunan. | Home sapiens | Eukaryota; Metazoa; Che                                           | Mammalia; Butheria; Pr                                     | 1 (bases 1 to 1051) | NIH MGG http://mac.nci.nih.aov/. | National Institutes of                                         |  |
| * RESULT 1<br>BM561083 | LOCUS                               | DEFINITION                                                                               | ACCESSION | VERSION                | KEYWORDS | SOURCE | ORGANISM     |                                                                   |                                                            | REFERENCE           | AUTHORS                          | TITLE                                                          |  |

ALIGNMENTS

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 Heidelberg/Germany) within the ≏PNA sequencing consortium of the
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Research Crots (IEV7), Imail & Wiemann&dkfr heidelberg do
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This clone (PKF2p119:0816) is available at the RZFD in Herlin.
Please contact the RZFD: Russourcentam, Heubmerweg 6, 14059
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 Email: poustkadmpimq berlin-dahlem.mpg.de
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Max-Planck-Institute for Molecular Genetics
 Threstrasse 73, 14195 Berlin, Germany 161: -49-30-84131623
Fax. -49-30-84131128
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 Contact: Poustka A.J.
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Carninci,P., Fukuda,S., Fukunishi,Y., Furuno,M., Hanaqaki,T.,
 Functional annotation of a full-length mouse cDNA collection Nature 409 (6821), 685-699 (2001)
 Mus musculus (strain:C5784,64) 10 Apys embry: ePNA to mI
clone lib:RIKEN full:length enriched mouse cDNA library
 sequencing pipeline with 184 multicapillary sequencer Genome Res. 10 (11), 1757–1771 (2000)
 High efficiency full-length cDNA cloning Meth. Enzymel, 403, 19-44 (1999) 99279253
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Direct Submission Sabmitted (19 JUL 2000) Yoshibide Hajabbidaki, The Institute of Ebysical and Chemical Research (REKEN), Laboratory for Genome Exploration Research Group, ETKEN Genomic Sciences Center (GSC), order Wakehama Institute; 1 7 22 Suchtreetbo, Ishtum: Ku. Yokohama,
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 242 CCIAGI FOACCCTTACGGATTCCTGGAGGGAACATCTATATTTCACCCCTGAAGAGTCCA 301
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 Construction of PTTTP-Pay (Pharmaria) with a modified polylinker; ist strand cDNA was prepared from mammary polylinker; ist strand cDNA was prepared from mammary abundlessee from a lawtatina femile, and was then primed with a Not 1 - oligo(dT) primer. Double-stranded cDNA was ligated to Eco RI adapters (Pharmacia), digested with Not 1 and cloned into the Not 1 and Eco Ri sites of the modified pTTT3 vector. Library is normalized. Library was constructed by Bento Scares and M. Pai ma Bonaldo. " 178 c 217 q 261 t lothers
 ManMalia; Eutheria: Rodentia; Sciuroquathi; Muridae: Murinae; Mus.
1. (bases 1 to 914)
 Okanyuta, Metarca: Chordata; Chanhata; Vertebrata; Esteleostomi;
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914 Lp aRNA linear EST 27-JAN-1.
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lMAGE:1247598 5' similar to gb w15440 RETRORIAGEA-ASSCCIALED
FROTEIN (HUMAN), gb_M26391 Mouse retinobiastoma susceptibility
 this clone is available toyalty free through GANL, contact the IMAGE Consortium (info@image.llnl.gov) for further information.
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 209 Thr ProArettys Ser Asule wAs polled by Val AsuVal Ile ProProBis Thr ProVal
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Email: segref genoscope.cns.fr. Web : www.genoscope.cns.fr.
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1 (bases: 1, 0, 605)
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 71 ACAAGOVIIIITCAIAIGIGITIIATIGGGGGGGGGGGTGGTGGTAGGTTGGTAATITGINAIAIA 12
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Dias Noto, E., Garcia Portra, P., Verjewski-Aimeida, S., Briones, M.R., Nagal, M.A., da Silva, W. Jr., Zaoo, M.A., Bordin, S., Costa, P.F...
Goldman, S.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H.
Brunstein, A., deolivoira, P.S., Bucher, P., Jongenec, C.V., Phare M.J., Scares, F., Brentani, P.R., Reis, L.F., de Souza, S.J. and
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Mammalla, Butberla, Plimutes, Catarrhini, Hominidae, Homo.
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 716 Endwig Institute for Cancer Research) profiles into the PUC 18 vector. Reverse transcription to Lissue mkNA and cDNA amplification were performed under low stringer confitons.
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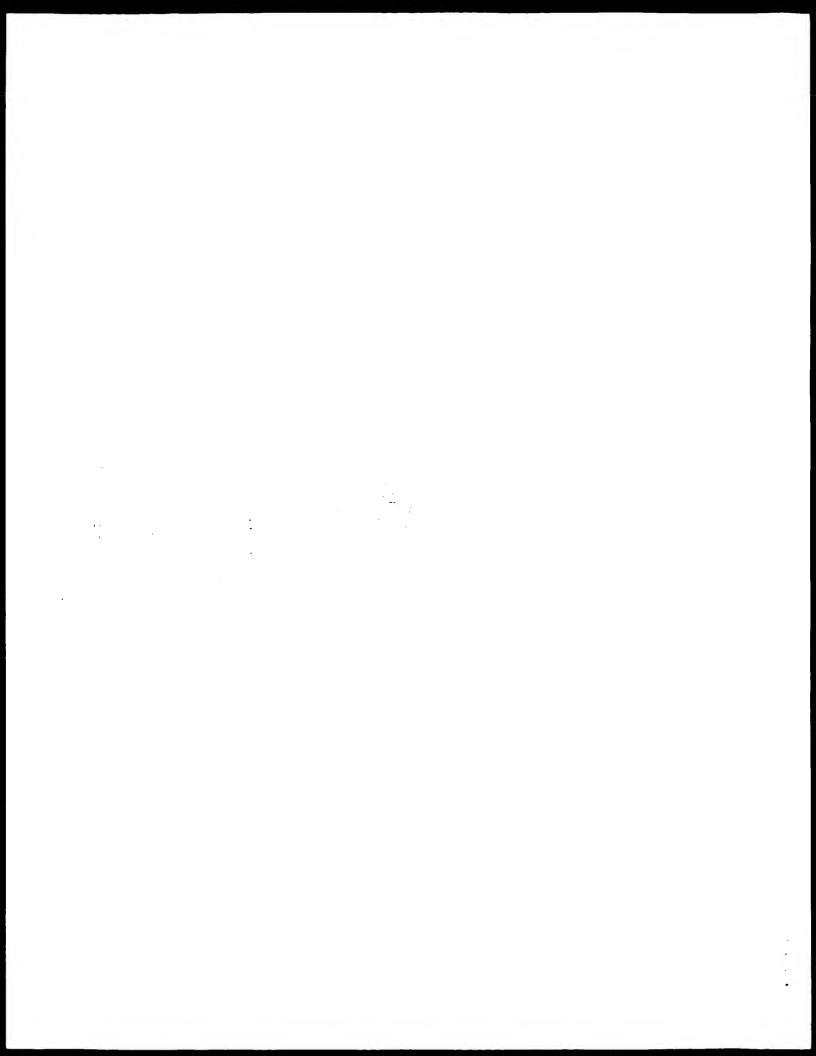
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 7007
 Libraries were constructed by Dr. Douglas Melton
DNA sequencing by: Washington University Genome Sequencing Center
 For information on obtaining a clone please contact: Juliana Brown
 This sequence now available from the HMAGE consortions, for clone orders contact: into-image. Hul.gov
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 Mus musculus
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This clone is available regalty free through LLNL, , contact the IMAGE Consortium (info@image.llnL.gov) for further information.
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 803 TTGG-GCCCTTTTGALACTACTCCACCATTAGGGGGGTTTTTAALTTGGCCAAGLAICA 745
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 744 GCCCAICCGAAAAICIIGITCCCICCIICCAIAIIGICCCGIIACICAAAGAAGAAIC
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| 4 1105.4 99.8 1242 6 AR072331<br>5 1105.4 99.8 1242 6 118497<br>8 1105.4 99.8 1242 6 118497<br>8 1105.4 99.8 1242 6 118497<br>10 1048.4 99.8 1242 6 1109369<br>10 1048.4 99.6 4597 6 109369<br>11 2415.7 6 2994 6 AR091965<br>12 2415 77 6 2994 6 AR091819<br>13 2415 77 6 2994 6 AR091819<br>14 2415 77 6 2994 6 AR091819<br>15 2415 77 6 2994 6 AR091819<br>16 2415 77 6 2994 6 HONGSP28<br>17 2415 77 6 2994 6 HONGSP28<br>18 2410.4 77 6 2994 6 HONGSP28<br>19 2410.4 77 6 2994 6 HONGSP28<br>10 2415 77 6 2994 6 HONGSP28<br>11 2410.4 77 6 2994 6 HONGSP28<br>12 2415 77 6 2994 6 HONGSP28<br>13 2415 77 6 2994 6 HONGSP28<br>14 2415 77 6 2994 6 HONGSP28<br>18 2410.4 77 6 2994 6 HONGSP28<br>19 2415 77 6 2994 6 HONGSP28<br>19 2415 77 6 2994 6 HONGSP28<br>19 2415 77 6 2994 6 HONGSP28<br>20 2108.6 67 7 4591 10 MOSPP105RP<br>21 2998 67 4 44 2 10 RATERIAS<br>22 296.8 224 4 AF2 20 HONGSP27<br>23 25 8 180388 9 HONGSP37<br>24 288.6 22 1 1815 10 GOG460<br>24 288.6 22 1 10188 2 AT125075<br>24 288.6 22 1 10188 2 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| 1105.4 99.8 1242 b ARCOZOSA<br>1105.4 99.8 1242 b 118495<br>1105.4 99.8 1242 b 118495<br>1105.4 99.8 1242 b 118495<br>11 3048.4 99.8 1242 b 118497<br>12 415.4 99.8 1242 b 118497<br>13 448.4 99.6 4740 9 HOMRHS<br>14 2415 72.6 2994 b ARCOSOSOS<br>15 2415 77.6 2994 b ARCOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOSOS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                                                                                                                      |     | AR072014<br>1118494<br>1118494<br>1109369<br>1109369<br>HUMKBS<br>AR091965<br>AR091965<br>AR0909128<br>HUMC09128<br>HUMKBSA<br>AR14797<br>AR14797<br>AR14797<br>AR14791                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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BIL564<br>19 6.4 320 1 G73426<br>19 6.4 320 1 G73426<br>19 6.4 320 1 G73426                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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                                                                                                                                                                           | 118495 Sequence 1<br>118495 Sequence 1<br>16541 Sequence 2<br>16545 Sequence 1<br>MISGOR HUMBAL LECTION AND HUMBAL LECTION AND 1465 Sequence AND 186407845 Sequence 1<br>RAZOR HS Sequence 1<br>RAZOR HS Sequence 1<br>RAZOR SEQUENCE 2<br>MZ8419 Human rection AND 42640 Sequence 2<br>MZ8419 Human rection AND 14564 Sequence 2<br>MZ8419 Human rection AND 14564 SEQUENCE 2<br>MZ8419 MOUSE rection 1000 14564 SEQUENCE 2                                                                                                                                                                                                                                                                                                                                                                                                                                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| 1105.4   99.8   4572   6   10437   1105.4   99.8   4597   6   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   10936   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77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   116   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   77.6   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                                                                                                                                                                         | 114492 Sequence 1<br>105409 Sequence 1<br>M154000 Human retin<br>Ac1444 H.Saptens D<br>AKC91845 Sequence<br>AKC91845 Sequence<br>AKC91845 Sequence<br>BC69728 T133ce 3p<br>181465 Sequence 2<br>M28419 Human retin<br>AK44797 Sequence<br>E12660 cDMA encodi<br>B12640 cDMA encodi<br>B25424 Raftins nory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| 10. 10014<br>10. 10014<br>10. 10014<br>11. 1048.4<br>12. 2415<br>12. 2415<br>13. 2415<br>14. 2415<br>15. 2415<br>17. 6 2994<br>6 ARGORN 1<br>18. 2415<br>17. 6 2994<br>18. 18. 6 181465<br>19. 2410.4<br>19. | 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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                                                                                                                 |     | ARCOR 1955<br>ARCO78 11<br>BIDG09728<br>HUMKHSS<br>AR144797<br>E12560<br>ROZPP105RH<br>RATRP<br>UD011 13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ANGOPTABY Sequence ANGOPTABY Sequence RAZOFAST Sequence RAGOPTAS Sequence 18.465 Sequence AZA4759 Sequence ELZ660 CDNA encodi MZ6491 Mouse retin 10.2443 Mouse retin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| 14 241: 77.6 2994 6 ARCOSENS 1 15 2415 77.6 2994 6 HC009728 16 2415 77.6 2994 6 HC009728 17 2415 77.6 2994 6 HC009728 18 2410.4 77.4 2995 6 ARIA4797 19 2110.2 67.8 4591 6 E12560 20 208 67.7 422 10 MUSEPIOSHE 21 100.4 67.8 4591 6 E12560 21 2086 67.4 4442 10 MUSEPIOSHE 22 1401.6 67.9 4565 5 U00113 23 1394 44.8 4541 10 MUSEPIOSHE 24 1393.4 44.8 4541 10 MUSEPIOSHE 25 40.8 25.8 25.8 1808 5 AUNRETINBP 25 815 25.8 1854 4 ARCOSENS 26 815 25.8 1865 5 U00883 2723.4 22.6 1815 1 GOGGHO 37 22.0 87 1 1698 5 AVCOSENS 38 220.8 7.1 1698 5 AVCOSENS 39 220.8 7.1 1698 6 E12564 44 220.8 7.1 1698 6 E12564 44 220.8 7.1 1698 6 E12564 45 218.8 7.0 1697 6 E02941 48 220.8 7.1 1698 6 E12564 44 199 6.4 320 11 G73426 45 199 6.4 320 11 G73426                                                                                                                                                                                                                                                                                      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| 14 2415 77.6 2994 6 RECORDS 81<br>15 2415 77.6 2994 6 181465<br>17 2415 77.6 2994 6 181465<br>18 2410.4 77.6 2994 6 181465<br>19 2110.2 67.8 4991 6 E1256<br>21 208.6 67.7 4591 10 MUSPPLOSH 1<br>20 2108.6 67.7 4591 10 MUSPPLOSH 1<br>21 1401.6 67.0 3456 5 000118<br>22 1401.6 45.0 3456 5 000118<br>23 1394 44.8 1554 4 AF230'42<br>24 1393.4 44.8 1554 4 AF230'42<br>25 996.8 20.0 2808 5 WURETINB 2<br>26 815 26.8 62825 9 AL136960<br>27 23.4 25.8 62825 9 AL136960<br>31 698.8 22.4 346 5 AF102601<br>32 220.8 72 110188 2 AF102877<br>34 288.6 9.3 391 9 F4601582<br>35 225.2 7.2 110188 2 AC105877<br>36 220.8 7.1 3693 6 E1256.1<br>44 220.8 7.1 3693 6 E1256.1<br>44 220.8 7.1 3693 6 E1256.1<br>44 320 9 5.4 320 1 G73426<br>45 220.8 7.1 3693 6 E1256.1<br>46 220.8 7.1 3693 6 E1256.1<br>47 220.8 7.1 3693 6 E1256.1<br>48 220.8 7.1 3693 6 E1256.1<br>49 6.4 320 1 G73426                                                                                                                                              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                                                                                                                 |     | AR207841<br>181009728<br>181465<br>HUMKHSA<br>AR144797<br>AR14797<br>MUSPP105RB<br>RATRP<br>000114                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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                                                                                                                 |     | HF009728<br>HUMKHSA<br>AR144797<br>E12560<br>ROSPF105RH<br>RATRP<br>U00113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Bides/28 Tissue sp. 181465 Sequence 2. M28419 Hundan retin AR144797 Sequence E12560 cDNA encodi M25591 Mouse retin D2523 Realton north callocalocalocalocalocalocalocalocalocal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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                                                                                                                 |     | HUMKHSA<br>AKIA4797<br>AKIA4797<br>MUSPF105KB<br>KATKP<br>000113                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | M28419 Human retin<br>A444797 Sequence<br>E12560 cDMA encedi<br>M26491 Mouse retin<br>P52438 Reflus nory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| 18 2410.4 77.4 2995 6 AR144797 19 2110.2 6 7.8 4591 6 E12560 2.0 20.08.6 67.7 4591 6 E12560 2.0 20.08.6 67.4 4442 10 MUSPPLU5RH 22 1401.6 45.0 3456 5 0.00013 2.3 40.8 45.0 3456 5 0.00013 2.3 40.8 45.0 3456 5 0.00013 2.3 43.8 46.8 4541 5 GDRETINBP 25 8.5 20.0013 2.3 44.8 4541 5 GDRETINBP 25 8.5 26.8 245.2 6 109342 2.2 815 26.8 245.2 6 109342 2.3 815 26.8 245.2 6 109342 2.3 815 26.8 248.5 9 ALIMERELAS 2.3 48.5 26.8 24.8 5 AYGORAS 3.3 488.6 24.8 31 GOGAGO 2.3 4 881.2 15.5 210.2 10 RATETNBLST 2.3 81.5 20.8 3.0 44.5 5 AYGORAS 3.3 225.2 7.2 110188 2 AYGORAS 3.3 225.2 7.2 110188 2 AYGORAS 3.3 225.2 7.2 110188 2 AYGORAS 3.3 225.2 7.2 110188 2 AYGORAS 3.3 225.8 7.1 1698 6 E1256 4.3 20.8 7.1 163426 4.3 20.1 1734426 4.3 20.1 1734426                                                                                                                                                                                                                                                                            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AR144797<br>E12560<br>MUSPP105RB<br>RATRP<br>ROD0113<br>AF230742                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ak14797 Sequence<br>E12560 cDNA encodi<br>M26591 Mouse retin<br>D2233 Rattus nory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| 19   2110.2   67.8   4591   6   E12560     2008.6   67.7   4591   10   MISSPIJO5RH     2008.6   67.7   4591   10   MISSPIJO5RH     21   401.6   45.0   3456   5   000113     22   401.6   45.0   3456   5   000113     23   44.8   45.4   4   AF330'42     24   1394.4   44.8   4541   4   AF330'42     25   84.5   26.8   4542   6   1093'32     26   84.5   26.8   8242   5   400MRE23     20   84.5   26.8   803'48   9   400MRE23     20   84.5   26.8   803'48   9   400MRE23     31   698.8   22.4   348.6   5   AF120'26     32   26.8   27.2   110.18   2   AF120'32     34   288.6   9.3   94.4   5   AV1250'3     35   225.2   7.2   110.18   2   AV1250'3     36   220.8   7.1   1698   6   E1256.1     37   220.8   7.1   1698   6   E1256.1     38   220.8   7.1   1698   6   E1256.1     44   220.8   7.1   1697   6   E099'4     45   207   6.6   480   9   HIMRBSY79     45   199   6.4   320   11   G73'426     46   199   6.4   320   11   G73'426     47   199   6.4   320   11   G73'426     48   199   6.4   320   11   G73'426     49   199   6.4   320   11   G73'426     40   20   20   20   20   20   20     40   20   20   20   20   20   20     41   20   20   20   20   20   20     42   20   20   20   20   20   20     43   20   20   20   20   20   20     44   20   20   20   20   20   20     45   20   20   20   20   20   20     45   20   20   20   20   20   20     46   20   20   20   20   20   20     47   20   20   20   20   20   20     48   20   20   20   20   20   20     49   20   20   20   20   20   20     40   20   20   20   20   20   20     40   20   20   20   20   20   20     41   20   20   20   20   20   20     42   20   20   20   20   20   20     43   20   20   20   20   20   20     44   20   20   20   20   20   20   20                                                                                                                                                                                                                                                                                     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|     | E12560<br>MUSPP105RB<br>RATRE<br>UD00113<br>AP230742                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | El2560 cDNA encodi<br>MZ6391 Mouse retin<br>D2523 Matths nory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| 20 2108.6 67.7 4591 10 MUSPILGSRH 21 2098 4742 10 RATRP 22 1401.6 45.0 4452 10 RATRP 23 1393.4 41.8 1554 4 AP230'42 24 1393.4 41.8 1554 4 AP230'42 24 1393.4 41.8 1554 4 AP230'42 25 813 25.8 24.0 2464 5 GDRETINB 25 815 25.8 245.2 6 L093'92 29 815 25.8 180'38 9 HUMRETBLAS 29 815 25.8 180'38 9 HUMRETBLAS 30 223.4 3185 10 GGAO 31 698.8 22.4 3185 5 AF10260.1 31 698.8 22.4 3185 5 AF10260.1 32 220.8 220.8 31 9 F 450'15S2 34 225.8 80 301 9 F 450'15S2 35 225.8 7.2 110'188 2 AF10S877 36 220.8 7.1 690 6 E1256.1 37 225.8 7.1 1698 2 AF10S877 38 220.8 7.1 1698 6 E1256.1 39 220.8 7.1 1698 6 E1256.1 41 220.8 7.1 1698 6 E1256.1 42 20.8 7.1 1698 6 E1256.1 43 220.8 7.1 1698 6 E1256.1 44 320 9 F440'5 HUMRESSY'5 44 199 6.4 320 11 G7342.6                                                                                                                                                                                                                                                                                 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                                                                                                                  |     | MUSPP105RB<br>RATRP<br>U00113<br>AP230742                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | MZ6391 Monse retin<br>PZ5233 Rattus norv<br>nonlta calles sall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  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| 21 2098 67.4 4442 10 RATRP 22 1401.6 47.0 4442 10 RATRP 22 1401.6 47.0 4452 10 RATRP 23 1401.6 47.0 44.8 1554 4 AP230442 AP230442 AP333.4 44.8 1554 4 AP230442 AP230442 AP333.4 44.8 4541 5 GDRETINB 25 9 61.8 25 9 HUMRELS 25 8 10 S 26.8 15.2 1815 11 GOG460 AP3 25.2 1815 11 GOG460 AP3 26.8 1815 11 GOG460 AP3 26.8 19.9 44 5 AP125075 AP3 248 8 9.3 444 5 AP125075 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 1698 6 E1256 AP3 220.8 7.1 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                                                                                                  | D25213 Rattus norv                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   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| 22 1401.6 45.0 3456 5 000113 23 1394 44.8 4541 5 0100113 24 1393.4 44.8 4541 5 0100113 25 843 26.8 245.2 6 10339.2 26 843 26.8 245.2 6 10339.2 27 845 26.8 180388 9 HOMRERIAS 29 845 26.8 180388 9 HOMRERIAS 30 723.4 23.2 1815 1 0064791 31 698.8 22.4 346 5 AV12607 34 483.2 15.5 210.2 10 RATKINBLST 35 248 8.0 301 9 F44601582 36 220.8 7.2 110188 2 AV12607 38 220.8 7.1 1698 6 E1256.1 39 220.8 7.1 1698 6 E1256.1 44 220.8 7.1 1698 6 E1256.1 45 220.8 7.1 1698 6 E1256.1 46 220.8 7.1 1698 6 E1256.1 47 220.8 7.1 1698 6 E1256.1 48 220.8 7.1 1698 6 E1256.1 49 6.4 320 1 67342.6 45 199 6.4 320 1 67342.6 45 199 6.4 320 1 67342.6 45 199 6.4 320 1 67342.6                                                                                                                                                                                                                                                                                                                                                                   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                                                                                                                 |     | U00113<br>AF230742                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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| 24 1393.4 44.8 4541 5 GDRETINB 25 996.8 12.0 286.8 5 NVRETINBF 26 835 25.8 245.2 9 HUMREG.2 27 835 25.8 180388 9 ALIJ36960 29 835 25.8 180388 9 HUMREG.2 30 723.4 23.2 1815 11 GOG440 31 698.8 22.4 1815 11 GOG440 32 483.2 15.5 210.2 10 RATENBLST 34 483.2 15.5 210.2 10 RATENBLST 35 248 8 9.3 944 5 AV125075 36 248 8 9.0 10188 2 AV105877 37 220.8 7.1 1698 6 E1256.1 39 220.8 7.1 1698 6 E1256.1 44 220.8 7.1 1698 6 E1256.1 44 220.8 7.1 1698 6 E1256.1 44 220.8 7.1 3698 6 E1256.1 45 218.8 7.0 1697 6 E09941 45 218.8 7.0 1697 6 E09941 46 220.8 7.1 373426 47 199 6.4 320 11 G73426                                                                                                                                                                                                                                                                                                                                                                                                                                          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| 42 218.8 7.0 1697 6 509941<br>44 207 6.6 480 9 F46015816<br>45 199 6.4 320 11 G73426<br>ALIGNMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     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| 4 127 0.4 520 1 G75426<br>5 199 6.4 520 1 G75426<br>ALICHMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| 133 6.4 52U 11 G754Zb<br>ALICHMENIS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    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|           | 4600 bp mRNA librar PRI 12-JUL 1995 | RNA, complete eds.                                        | •             |                    |                         | Α.                                        |          | Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; | i; Hominidae: Bomo.                                        |                     | Friend, S.H., Horowitz, J.M., Gerher, M.R., Wang, X.F., Bostenmann, E., |                              | Deletions of a DNA sequence in retinoblastomas and mesenrhymal |  |
|-----------|-------------------------------------|-----------------------------------------------------------|---------------|--------------------|-------------------------|-------------------------------------------|----------|-------------------------------------------------------------------|------------------------------------------------------------|---------------------|-------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------|--|
|           | HKNA                                | (KH1) m                                                   |               |                    |                         | A to mKN                                  |          | raniata;                                                          | atarrhin                                                   |                     | Ger.M.R.                                                                |                              | retinoble                                                      |  |
|           | 4600 bp                             | associated                                                |               |                    | in.                     | p4.7k) cDN                                |          | Chordata; 🗅                                                       | Primates; Co                                               |                     | 2,J.M., Gerh                                                            | , K. A.                      | r ui opuonba                                                   |  |
|           | HUMKBA1KA                           | Human retinoblastoma associated (RBI) mkNA, complete eds. | M33647 J02994 | M34647.1 GI:190945 | retinoblastoma protein. | Homo sapiens (clone: p4.7k) cDNA to mkNA. |          | Eukaryota; Metazoa; (                                             | Mammalia, Butheria, Primates, Catarthini, Hominidae, Homo. | 1 (bases 1 to 4600) | Friend, S.H., Horowit                                                   | Li, F. P. and Weinberg, R.A. | Deletions of a DNA sa                                          |  |
| HUMRHAIRA | LOCUS                               | DEFINITION                                                | ACCESSION     | VERSION            | KEYWORDS                | SOURCE                                    | ORGANISM |                                                                   |                                                            | REFERENCE           | AUTHORS                                                                 |                              | 1111E                                                          |  |

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GTDLSFPWTLNVLNLKAEDEYKVTESFTKAEGNITFEWIKHLERCEHRIMESLAWLSD
SPLFDLIKQSKDREGPTDHLESACPLNLPLQNNHTAADMYLSPVRSPKKKGSTTRVNS
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 I PGGNTY LSPLKSPYK LSECLPTPTKMTPRSRTLVS LGESFGTSEKFOK I NOMVCNSD
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 Draft entry and computer-readable copy of sequence for [1] kindly
 67 ACATGTGAACTTATATATTTGACACACAGGAGITGGAIATGTAGTGAAAIAAAFFGF 126
 127 GCALTGCTGCTAAAAGTTTCTTGCATCACATTTTTTATTAGCTAAAGGGGAAGTATTACAA 186
 187 ATGGAAGATGATGTGGTGATTTGATTTGAGTTAATGGTGTGTGTGTGAGTALTTAL1 246
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 467 GAAAATGATACAAGAATTATGAAGTTCTCTGTAAAGAACATGAATGTAATATAGATGAG 426
 905 ACATGTGAACTTATATATTTGACACAACCCAGCAGTTCGATATGTACTGAAATTGT 564
 565 GCATTCHTCATAAAATTTCTTGCATCACATTTTTATTAGCTAAAAGGGGAAGTATTACAA 624
 745 ARTTOACPTOSACACCCARRICARRACTARAACAGGAGTGCACGATAGCAAAACAACTA 804
 Gaps
 7 ATGICAAGACIGITGAAGAAGIATGADGTATIGITIGCACTCTICAGCAAATIGGAAAGG 66
 tumers: organization of the sequence and its encoded pr
Proc. Natl. Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
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 provided by S.H.Friend, 10-FEB-1988.
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1. .4600
 /organism-"Homo sapiens"
 /protein_id "AAA69806.1"
 /db xret-"taxon.9606"
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 /clone="p4.7R"
 /codon_start
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1447 GPARARAPANARPARPPIPARPPIPPRRAPPIPPRRAPPIPPRAPPIPPROTOTOT 1506
 1087 TCTGGAAGASATITGICITITGCCAIGGAIICIGAAISTGCIIAATTTAAAAGCCIITGAT 1146
 1207 AAACATTTAGAAGGATGTGAACALGGAALGATGGAALGCCTTGCALGGCTGLCAGATTGA 1266
 1267 CCTTTATTTGATCTTATAAACAATCAAAGGACCGAGAAGGACCAACTGATGACCTIGAA 1326
 1105 GIAATIGOIGGAGAGAGIGGAGTTAGGAGIGITAIGAACAGTATGGAACAAITAAIGAIG 1164
 1345 PERSTANDA POSTIGIATIVAS CASTAAT GAA LOOTI CALIGATAA ISAA BAAGAA SAACA 1404
 967 LEAGCATHCAAAAITTTAGCAAACTICTGAAIGACAACAILTTCALAIGICTHAIIG 1026
 1405 TTATCCATTCAAAATTTTAGCAAACTTCTGAATGACAACATTTTTGATATGTGTTTATTG 1464
 1327 POPGOTIGIO PER PATOTICO CICICAGAA AA CACACIGOAGAAATATGIAI 1386
 487 TOTRANTIGRACTITICIACAGOTITICAAAATOTITICTAAACGATACGAAGAAATTITATOTTAAA 546
 925 TCTAATGGACTTTCCAGAGGTTGAAAATCTTTCTAAACCATACGAACAAATTTATCTTAAA 981
 547 AATAAAGATTAGATGTAAATTATIIIIGGAIGAIGATAAAACICIICAGACIGATICI 606
 667 CTAATHOOTOOACAAGTOOAGTTAGGACTGUTALGAAGACCATGCAACAATTAATGALG 726
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 907 CTIGGAGTICGCITGIATIACGAGIAAIGGAAICCAIGGIIAAAICAGAAGAAGAACGA
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 1765 TCTGCTTGTCCTCTTAATCTTGCTCTCCAGAATAATCACACTGCAGCAGATATGTATCTT
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| 5 3<br>5 3                    | 1507         | TCACTGTTTATAAAAAAGGGTATCGGCTAGCTATCGGGGGGGAAATACACTTTGTGAA<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1566         |
|-------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 5 3                           | 1567         | CONTROLICE GARGACAGA I AGAACA I ALGA I CHGACCOTTET CCACOCACC<br>TELETETETET CACACACACACACACACACACACACACACACACACACA                                                                                                                                                                                                                                                                                                                                                                                                                | 1626<br>2064 |
| 5 67<br>E 67                  | 1627<br>2065 | CTOPAGATOADTA IDAACTCA FOAGACACGCATTTOOACGAAATTA IGATOTTOCC<br>TTOTTITTITTITTITTITTITTITTITTITTITTITTIT                                                                                                                                                                                                                                                                                                                                                                                                                           | 1686<br>2124 |
| § - <del>2</del>              | 1687         | ATGITATGGGATATGCAAAGTGAAGAATATAGACCITAAATTCAAAATCATTGTAACAGGAAGTHHHHHHHHHHHH                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1746<br>2184 |
| 5 3                           | 1747         | TACAAGGATCT LCCTCATGCTGTTCAGGAGACTCAAAGGTGTTTTGATGAAGAAGAGTTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1806<br>2244 |
| 5 £                           | 1807         | GAGTATGATTCTATTATAGTATTCTATAAGTCGGTGTTGATGCAGGAGGAGGAAAGAAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1866<br>2304 |
| -5 <del>-</del> 2             | 1867<br>2305 | ATTITGCASTATGCTTCCACCAGGCCCCTACCTTGTCACAATACCTCACATTCCTCGA HIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1926<br>2364 |
| <u> 5</u> 3                   | 1927         | 927 - ARCOLLANARITHOLIANTO ACCOLLANGATIO GGAGGGACALCHATHTCA - 198<br>  TELETITE TELETITE TO THE TELETITE OF THE TELETITE ACCOLLANCE ARCOLLANARITH TO TARAFTER - 242                                                                                                                                                                                                                                                                                                                                                               | 1986<br>2424 |
| S 2                           | 1387         | OPOPTGANGAGLOPATATAAAATTICAGAAGGTCTGCCAAGACCAAAAATGACTCCA<br>FELTITITITITITITITITITITITITITITITITITITI                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| 6 €                           | 2047         | AGATCANGATCTTAGIATCAATGGTGAATCATTCGGGACTTCTGAGACTTCCAGAAA<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |
| 5 3                           | 25.45        | ATAMATCAGATORIA IGTAACAGCGCGTGTGCTCAAAAGAAGAGGTGCTGAAGGAAG                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |
| 5 2                           | 2167<br>2605 | OCTOT TAAAROA TOAAAAAA TAGOLIIIGA ATTGAAGATGAGA ISAAGGAGATGGA<br>ITTELLIITELLIITELLIITELLIITELLIITELLIITELLIITELLIITELLIITEL<br>CCIOCLAAAROACIIGAAAAAACIAGGGIIIGA FATTGAAGGA ICAGAGGAGATGGA                                                                                                                                                                                                                                                                                                                                       | 2226         |
| 5 3                           | 2227         | AGTAAACATCTCCCAGGAGGCTCCGAATTTCAGCGGAAACTGGCGGAGAAATGTTCTACT<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |
| 5 3                           | 2287         | CGAACACGAA LOCAAAAGCAGAAA LGAA LGA AGCA LGGA TACCTCAAACAAGGAAGG<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2346<br>2784 |
| - <del>5</del> − <del>2</del> | 2.185        | 447 - AAA DAGGALT CAGGACCI TGG DGGACACTGTCTCACCTCGGATTCATTGTCTCTCTC = 246<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2406<br>2844 |
| \$ £                          | 2407<br>2845 | CMGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCGACATTTAATATCTTCAGGTCAGGTTTAATATCTTCAGGTCAGGTTTAATGGCGACATTTAATAATATCTTCAGGTCTCTTTTAATATCTTCAGGTTCTCTTTAATGATATCTTCAGGTTCTCTTTAATGGCGACATTTAATATCTTCAGGTTCTCTTCAGGTTCTCTTTAATATCTTCAGGTTCTCTTTAATATCTTCAGGTTCTAATATCTTCAGGCTCTCTTAATATCTTCAGGTTCTTCAGGTTCTTCAGGTTCTTCAGGTTCTTCAGGCTCTTCAGAGGTTCTAATAATAATATCTTCAGGCTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCTTCAGAGGTTCAGAGGTTCAGAGGTTCAGAGAGAG | 2466<br>2904 |
| 5 5                           | 2467         | CTHTELEGISCALALAAAA BUGCAAATIGI ITGGOTGATICCTAAGCCACTIGAA<br>HELLIH HELLIH KATAAAA TAGAAAA TAGI I GGGIGA FICCI AAGCCACTIGAA                                                                                                                                                                                                                                                                                                                   | 2526<br>2964 |
| 3 G                           | 25.27        | AFGLIAGICALIGITALIACAGA FIGAAAALCTIGEGTAAAIGCIGCGATTAAAA<br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2586<br>3024 |
| 5                             | 74.87        | AGITGENSCAGALIGITECTCTTCCAAAGIAAAATTGCTGGGTTAATGGAIAGTAAGA                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2646         |

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Cancer gene determination and therapeutic servening using signature
 Linear PAL 09 JAN Zusz
 Enkaryota, Metazoa: Chordata; Craniata; Vertebrata; Enteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 787
 8445 TGATACTATCATACTACTGAAACAGATTTCATACCTCAGAATGTAAAAGAACTTACTGAT 8504
 8025 AGTIGIAGCAGALIGITICCTCTCCAAAGTAAAALIGCTGTGTTTTATGGATAGTAAGA 8084
 2647 ATGGCCTAGAGIGGGAGICCIGAIAACCCAGGCTGIMGAMIAMITGMITMG 2706
 7 ATGTCAAGACTGTTGAAGAAGTATGATGTAITGTTTGCACTCTTCAGCAAATTGGAAAAGG 66
 Young, P.E., Augustus, M., Carter, K.C., Ebner, R., Endress, G.,
Horrigan, S., Soppet, D.R. and Weaver, Z.
 2827 CCCATTICACCAAAATTATGCTGAAGTTCTTGTGGAAAAATGGATATTATTAGAAATTAGAA
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 1185 GCTTGTTTTATAAATTTTGCTTTTAATTAAATAAAGCTGGAAGCAAAGTATAACCATA
 2887 AAAAAITACIAAITITACACAITAGAITTIATITITACIAITGGAATCIGALATACTGIGI
 8007 IGATACTATCATACTACTGAAACAGALITCATACCTCAGAATGTAAAAGAACTTACTGAT
99.8%; Score 4107; DB 6; Length 4839;
CONSERVATIVE 0; Mismatches 25 17
 8067 IATTITCIICAICCAACTIAIGTITITAAATGAGGAITATIGAIAGT 4114
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 Patent: WO 0194529-A 1210 13 DEC-2001;
 Sequence 1210 from Patent We0194629.
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/organism="Homo saptens"
 /db_xret="taxon:9606"
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 AX330701.1 GI:18103679
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 Local Similarity
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 Matches 3107;
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| भु द्व         | 127                  | GCATTGGTGCTAAAAGTTTCTTGGATCACATTTTATTAGCTAAAGGGGAAGTATTACAA<br>UULLIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII                                                                            | 186<br>758 |
|----------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| ir a           | μ. υ. κ.<br>Ε. υ. κ. | ALGSAASA GALCIGGI GALTI CALTI CAGTTAATGCI AFGTGTGCTTGAGTATTATT<br>                                                                                                              | 46<br>18   |
| <u>ې</u> پې    | 7.4.2<br>7.1.4       | AAACHCHCACCICCCATGHGCTCAAAGAACCATATAAAACAGCHGTTATACCCATTAAT<br>                                                                                                                 | 96         |
| 는 <del>후</del> | 5(),<br>474          | GGTTCACCTCGAAPACPCAGGGGAGGTCAGAAPAGGAGTGCACGGATAGCAAAACAACTA<br>FELFELETETETETETETETETETETETETETETETETET                                                                        | 38         |
| يد بخ          | 41.7                 | GAAAATGATACAAGAATTATTGAAGTTCTCTGYAAAGAACATGAATGTAATAYACATGA<br>FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF                                                                              | 26<br>98   |
| ≥- <u>-</u> ⊋  | 427                  | GIGAAAAA GIITATTI CAAAAA TITTATACCITTI ATAGATICTCTI GGACTI CITAACA<br>                                                                                                          | 86<br>058  |
| ķ, φ           | 487<br>1059          | TCTAAT-GBACTTCCAGAGGTTGAAAATCTTTCTAAACSATACGAAGAAATTTATCTTAAA<br>  CHIHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH                                                                       | 46<br>118  |
| }- <u>.</u>    | 5,47                 | AATAAANATCTANATGKAAGATTATTTTGGATCATGATAAAATTCTTCTGTTTTTTGTGCTGATTCTTTTTTTT                                                                                                      | 06<br>178  |
| ¥ 4            | 607                  | ATAGAGAGTTTTGAAAGAGAGAGAAAAAGAAAAGTAAAATTGATGA                                                                                                                                  | 66<br>238  |
| × 4            | 667<br>1239          | GIAATICCICCACACACICCASI PAGGATTGITATGAACACTATCCAACAATTAATGAGGGGGGGAATTGITTTTTTTTTT                                                                                              | 26<br>298  |
| হৈ এ           | 727<br>1299          | ATTITANATICAGGAAGTGALGAGGAGAAAATCIGATTICCTATTITAAGAACTGC<br>FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFAAATTGAGAAATTGCTATTTAAGAACTGG                                                     | 86<br>358  |
| 25 B           | 187                  | ACACTICAATICAAAACAAACTATACTICAAAAGAGTIGAAGGATATAGGATACATCTTTTAAA<br>                                                                                                            | 46         |
| 관 골            | н47                  | GASAATTTGCTAAAGCTGTGGGACAGGTTGTGGACAATTGGATCAGGGGATACAAA<br>                                                                                                                    | 06<br>478  |
| ्र<br>इन्      | 407                  | CTEGRATICGCI GLADIACCGACTAALGGAATGCTTAAATGAAGAAGAACGA<br>FELFELLI FELFELLELLELLELLELLI FELFELLI FELFELLELLELLELLELLE<br>CTEGRATICGCTIGTATTACGAGTAATGGAATCCATGCTTAAATCAGAAGAAGAA | 66<br>538  |
| ge g           | 967                  | TTATONATICAAAATTTTAGCAAACTTCTGAATGACAACATTTTCATATGTGTGTFFATTG<br>                                                                                                               | 026<br>598 |
| £ 4            | 770!<br>1589         | GOGTGGGCTCTTGAGCTTGTAATGGCCACATATAGCAGAAGTACATCATGATGATGATGATTGAT                                                                                                               | 086<br>658 |
| कु स्          | 1487<br>1859         | TCLGGAACAGATTIGLGTTLCCCALGGATTCTGAATGTGCTTAATTTAAAAGCCTTTGATT<br>                                                                                                               | 146<br>718 |
| <u> ş. ş</u>   |                      | ELLLACAAAQIGALCGAAAGITITTALCAAAGCAGAAGGAACTTGACAAGAGAAATGATA<br>ELLLACELLELLITITITITITITITITITITITITITITITITIT                                                                  | 206<br>778 |
|                | 1207                 | AAACATTTAGAACGATGTGAACATCGAATCATGGAATCCCTTGCATGGCTCTCAGATTCA                                                                                                                    | 992        |

1686 1926 2499 ASCCCTIACAASTILICITASTICACCTIACGAATICCTGGAGGAACATCTATATTICA 2558 1567 CONTINUAR PRAGRACIO AGANTIA GANCAIATO A GONO COLLI POCAGO ACO 1626 1687 ATGTATGGCATATGCAAAGTGAAGAATATAGACCITAAATTCAAAATCATGTAACAGCA 1745 2259 AUGUAUGGGATATGGAAAGTGAAGAATATAGACCTTAAATTGAAAATGATTGTAAGAGGA 2318 1747 TACAAGGATCTECTCATGTTCAGGAGACATECAACGTGIIITGALCAAAGAAGA. 1806 1807 GAGTATGATTRTATTATTATTATATTATARGTTGGTTGTTGATGGAGAGTGGAAAAAAAI 1866 2439 APPERIOGAGEARGOTPROCAGGGGGGGGGGTACCFFGFGAGGGAALAGGTGACALFGGTGGA 2498 1927 ASCRITANDARITINATIONAL PROPERTION OF STANDARD SANDARD AND SANDARD AND 1986 1987 CCCCTGAAGAGTCCATATAAAATTTCAGAAGGTCTGCCAACAACAACAAAAATGACTCCA 2046 2739 CCTCCTAAACCACTGAAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGGATGAA 2798 2047 AGATCAAGAATCITAGTATCAATTGGTGAATCAITCGGGACTTCTGAGAAGTTCCAGAAA 2106 CCPPPARTPROATCPPATTPAAACAAFCAAAGGACCGAGAAGGACCAAGTGATCACTTGAA 2019 GCAGAGACACAACTICAGCCIICCAGACCCAGAAGCCAIIGAAATCIACCICII 1507 TCACTGITTIAIAAAAAAGIGIAFCGGCIAGCCIAICICCGGGCTAAAIACACIIIGIGAA 2167 CCPCCTAAAACCACTGAAAAAAAACTACGCTPTGAPATGAAGGATCAGAFGAAGGAATGGA 2139 OGCTICITATION OF ANALON OF ANALON OF CONTROLL OF ANY OCCUPATION OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF ANY OF 1867 ATTTECAGIASCIICCAMCAGGODOCIACCIECCACAAIACCICACAIICGICGA 2619 AGATICAAGAATICHTAGTATICATTICGGGAATICGTICGGGAAGTTICGGAAA 1387 TOTOCHGYANGALGLOCAAAGAAAAAGGIICAACIAGGGGGGGTGTAAATTCTACTGCAAAT TCIGCI1GLCCTCI1AALCIICCICICCAGAATAAICACIGCAGCAGATATGTATCTT 1447 GCAGAGACAAGCAACCICAGCCTTCCAGACCCAGAAGCCATTGAAATGTAGCTCTCTT 2199 CTGCBGAAATGAGTKTGACTCATGAGAGAGAGGCAIFIGGACGAAAITAIGAIGIGG 1267 1327 ò g a g ô g 5 ä ã CP ò q q ò q 9 QQ 업 Ś q d 5 ŝ ò ò ŝ à ŝ ò á ã :~ ~ ô

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PRI 05-MAY-1995
 Structure and partial genomic sequence of the human retinoblastoma
 Homo sapiens retinoblastoma susceptibility protein (KBI) mRNA and mutations.
 Eukaryotas Metascas Chesdatas Craniatas Vertebratas Euteloostomis
 3199 CCCATICACCAAAATIATCCTGAACTCTTCTCTCTCTCAAAATGGATATTATTAGAAATTAGAAA 3458
 4459 AAAAATTACTAATTTTACACATTTTATTTTACTATTGGAATCTGATATACTGTGT 3518
 2919 AAALGAGAATUTOAGGACOLIGGTGGAGACTGTGTACACCTCTGGATTCATTGTCTCTCA 2978
 252/ ATGITAGICATCATTATATATAGAATIGAAAATCTTGTGTAAATGCTGCCATTTAAAA 2586
 3099 AFGITAGFOATFOHTATTATAGAAGATTGAAAAATCTFGTGTAAAFCCTGCCATFTAAAA 315B
 3159 AGTTGTABPASATTGTTTCCTAPAGTAAAATTGCTGTGCTTTATGGATAGTAAGA 3218
 2642 A13GGCTAGAGIGGGAGTCCTGATAACCCAGGCCTGTCTGACTTGCTTGCCTTGTTTG 2706
 2707 TAGCATATAGGGATGTTGCTCTGTTTTATTAATTTATATGTAIATTTTTTTAATTT 2765
 2767 AACATGAACACCOTTAGAAATGIGICCTATCTTGCAAATGCAATTIGALTGACTG 2826
 2947 GCLEGETTTAAAAAFEFFF9CETTTAAATAAAAGCEGGAAGGAAGLAFAACGAA 3006
 2827 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATTAGAAATTAGAA
 2.447 AAATGAGGATGTGTGGGAGGTTGGTGGAGGTGTGTAGAGTGTGGGATTGATTGTGTGTGA
 2407 FAGA GIGACIGIATAACH FOOGAGH GIGHTTARGGOOGAGATHAATGTROAGGT
 2467 CTTTFIGGGAIATAAAATGTGGAGAIGCAATTGTITGGGTGAIICGIAAGCCACTIGAA
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Moder, T.L., Yandell, D.W. and Dryja, T.P.
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 Molecular mechanisms of oncogenic matations in tumors from patients
 /translation-"MPPK1PRKIAATAAAAAEPPAPPPPPPPPPEDEODSGPFDLPL
 Cowell, J.K. and Kaye, F.J. Bratial in a family with incomplete partial inactivation of the RB product in a family with incomplete penetrance of familial refinoblastoma and benian relinal tumors oncogene 9 (5), 1321-1326 (1994)
 Mechanisms of oncogenesis in pathents with familial retinoblastoms Br. J. Cancer 68 (5), 958 964 (1993)
 One ogenic point mutations in exem 20 of the RRI gene in families
 polymorphism analysis and polymerase charm reaction sequencing uncogner 7 (7), 1445-1451 (1992)
 Kratzke, R.A., Otterson, G.A., Hoga, A., Coxon, A.B., Geradis, J.,
 /product="retinoblastoma suspectibility profein"
/profein_id="AAM59465.1"
 Hodg.A., "madim,Z., Baird,P.N. and Cowell,J.K. Detection of heterozygous mutations in the RB1 gene in relinoblastoms patients using single situad contoundtion
 showing incomplete penetrance and mild expression of the
 retinoblastomá phenotype
Proc. Natl. Acad. Sci. U.S.A. M9 (15), 6177 6181 (1992)
 with bilateral and unilateral retinchlastoma
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-735 (1993)
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 Mutation data provided by Dr. B.L.Gallie,
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 E-mail: brenda haliz.eric.on.ca
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/qene-"RB1"
/note-"Tumor GOS13 unilateral trameshiff mutation
resulting in premature stop; Associated with this mutation
is a large [3q14,3 sub-band deletion; G00-118-734"
 /note-"Tumor GOS563 unilateral mutation causing premature
 127 GTATTGGTGTTAAAAGTITTTTGAAGTTTTTATTATTAAGGGGAAGTATTATAAA 186
 879 GCTTFAPPTEGAAFAQQGAGGGGAGGTPAGAAGAGGAGTGGAGGGATAGGAAAQAAQTA 938
 367 GAAAATGATACAAGAATTATTGAAGTTCTGTAAAAGAAGAFGAATGTAATATAATGAG 425
 427 GEGAAAATGETTATTEGAAAATTETATAGGITTTATGAATTGLGTTGGAGTGTGAAAA 486
 247 AAACTGTGGCGTGCCATGTTGGTCAAAGAAGGATALAAAAGAGGTGTTALAGGGAFTAAT 405
 7 ATGREAAGACTIGTTGAAGAAGTATGATGTTIGCAGICTICAGGAAAIIUGAAAGG (6
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GOO-118-734"
 /hote="lumor GOSIS9 unilateral mutation causing a
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 197 AUGGACALGAICUGGICAITTCATTICAGITAAIGCIAIGEGCOUTGACTAIGITTAIT
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PVLI KEEETOST I VPYNSVHY SKOLPYTYMTIQVASTRPPTLSPIPHI PRSPYRPSPSPLR
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 Zoote-Timor Gosl9 unilateral mutation causing a tentative
word splice; 300-118-734"
Kottation-151
GTILISEPWITINVENERAFOFFKVIESFIKAFONLFREMERHLERCEHFIMESLAMLSD
SPLEDLIKUSKOKEGPTDHLESACPLNLPLQNNETAADMYLSPVKSPKKGSTTRVNS
 /note-"Tumor @S561 unilateral trameshift mutation causing premature stop"
 /note-"RRF64 bilateral familial deletion mutation causing premature stop"
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| 1058                                                          | 546<br>1118                                    | 606<br>1178                                                                                                                                                                       | 666<br>1238                                                                                                  | 726<br>1298                                                                                                  | 786<br>1358                                                                                             | 846<br>1418                                                                                      | 906<br>1478                                                                                           | 3  | 1026.<br>1598                                                                                               | 1086<br>1658                                                                                                     | 1146                                                                                                | 1206<br>1778                                                       | 1256<br>1838                                                                                              | 1326<br>1898                                           | 1386<br>1958                                                 | 144<br>201                                                                | 1506<br>2078                                                                                 | 1566                                                                                                                                                                                                                                                                                             |
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| جد <u>ش</u>     | 15.07  | G YOAGA WAAAAAAAAAA COLAAGA HAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1623<br>1566 |
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| ئيہ ہد          | 1567   | OSONITE DI CICACONACONACIA AGAACA I ATCATCI GGACONITI INCACOGACO<br>TOTATATATATA ATTATATA I TATATA I ATATATA ATCATATA CONSTANDACIA<br>OSONITE I GALLA GARACO CANANA I ANANCA I ATCATATA CANACACOTITI TOCASANACO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1626         |
| ;               | 16.27  | CTOP AGAILATED A CAGAGA A GAGAGA A GAGAGA TO GAACTA A TA TOCATO TOCATO TOCATO TO TO TOCATO    | 1686         |
| ۵               | 1744   | CTECADALIGAGIA EGAGACIA GAGAGAGAGAGATI I GGAGGAATI FALGATOTI CITTO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1803         |
| ھ ج             | 15.87  | ATGTATGG*ATATGGAAAGTGAAGAATATAGACCTTAAATTGAAAATGTAAAGGA<br>  EESTIFFEELEELEEL   SEETHELEELEELEELEELEELEELEELEELEELEEL<br>  ATGTATGGYATAFGGAAAGTGAAGAATATAGAGCTTAAATTGAAAATGAAAAGA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1746<br>1863 |
| <u>&gt;</u> - 2 | 1747   | TAPAGGAPTI OT OTATGGIG HOAGGAGAGCA I CAAACGIG ITITGA OAAAGAAGAG<br>HEEFELLI IIII IIIII HEEFELLI HEEFELLI HEEFELLI HILLI HIL | 1806         |
|                 | 1807   | GASTATOATTOTATAGATTOTATAACTGGGTCTTCGATGCAGAGAGTGAAAACAAAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1866         |
| â               | 1924   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1983         |
| <u> </u>        | 1867   | ATTTGCAGTATCCAGGCCCCTACTTGCAGCAAGACCCAVATOCTCGAGATTGCACAATACCTACTTGTTTTTTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1926<br>2043 |
| ;               | 1327   | ASSICT TANAALT FOLDALICATA (1907) CTT ANGGATT (CTGAGAGAACA FOLDA FATTITA (1907) TTT (1907) TTTT (1907)    | 1986         |
| ų.              | Z044   | ACONDITACARSTITOTIAGITORCCTIACSGAITCCIGGASGGAACAICTAITTCA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2103         |
| ÷               | 2104   | CHOTT GAAGAGET ATATAAATTEGAGAAGTOOCAAPACGAGAAAATGACTGCA<br>TITTITITITITITITITITITITITITITITITITIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2046         |
| (* <u>.</u>     | 20147  | 047 ABAD AAGAATCIIASIALCAALISATGAATCAITÜGGGACITCIGAGAASITCCAGAAA 210<br>TITTITTITTITTITTITTITTITTITTITTITTITTIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2106         |
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| <u>.</u>        | 216.7  | CCTCCTAAACCACTACTAAAAAACTACGTTTGALALTGAAGATCAGTGAGAGAGAGAGAGAGTGCA<br>TELL TELLETTTTTTTTTTTTTTTTTTTTTTTTTTTTT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2226         |
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1 (bases 1 to 3242)
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1 (bases 1 to 4232) \rm Xu,H. J., \rm Hu,S. X. and Henedict,W.F. Broad spectrum tumor suppressor genes, gene products and methods
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                                                                                           2393 ATTITAAAITCAGCAAGIGAICAACÇIICAGAAAAIGIGAITIGGITAIIIAAGAAGTGG 2334
667 GIANTECTO AGAILEC AGIIAGGA HGIIALGAA ALIAH CAACAAHAAHGATG 726
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                                                                                                                                                                                             847 GAGAAATTTGCIAAAGCIGIGGGACAGGGIIGIGCGAAAIIGGAICACAC GAIACAAA
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                                                                                                                                                                                                                                                                                                                           967 PPATCCATTCAAAATTTTAGGAAACTTGTGAATGAGAACATTTTTGATALGTGTTTATTG
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                                                                                                                            787 ACAGTGAATCCAAAAGAAAJIATACTGAAAAGAGTGAAGGATATAGATACATGTTTAAA
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293 CCCATTCACCAAAATTATCCTGAACTCTTCTGCAAAAATGGATATTATATTAGAAATTAGAA
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                                                                                                                    607 ATAGACASTITIGAAACACACAGAACACGAAAAASIAACCIIGAIGAAGAGGIIGAAI 666
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                         427 GTGAAAAATGTTTATTTCAAAAATTTTATACCTTTTATGAATTCTCTTGGACTTGTAACA 486
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훒	1822	ICLOTESTAMIA POTOCAANIAAAAAASI TOAACTAGGGGTGAAATTO IACTGGAAAT	1881
5 3	1447	STAGASATATAN AASTAASTE BOTCH DE AGAGGAAAGCAT IGAAALE LAGGEGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	1506
ŝ	1507	TOWTGITITALAAAAAAGIGITATGGGGTAGGTATGTGGGGCTAAATAGAGTTTGTGAA	1556
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5 3	1567	POPPLICIBLE INDOCACA AND AND AND AND AND AND AND AND AND AN	1626
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5	16.87	ATGIALGEGATALGEAAAAGGAAGAACAAACATAAAATTCAAAATGATGTAACAGA	1746
Ē	7177	ATGTATGGGATATGGAAAGTGAAGATATAGAGCTTAAATTGAAAATGTAAGAGGA	2181
5 É	1/4/	TANAGGARICTICCTICA ROTTCHICAGGAGATICAAACGAGGITTITGATCAAAGAAGAAGA THITITITITITITITITITITITITITITITITITITI	1806 2241
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5	1387	COCCIGAAGAGE CATATAAAATTEAGAGGECTGGCAACAACAAAAAAGGCAACAACAACAAAAAAGGCAACAA	2046
=	2422	CCCCTGAAGAGTGCATATAAAATTTGAGAAGGTGTGGGAAGAAGAAAAAATGAGTGGA	2481
5 1	7 to 7	A ANTALA FELLANTANI ANTERNA FANTANI ANTERNA ANTALA	2106 2541
7	2107	ATAAATPAGATOGTAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAA	2166
÷	2542	ATAMATCA STAGTATS TANGTAN CAGTG FOCT CANANASAGTG CEGAAGGAACCAAC	2601
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Human retinoblastoma susceptibility gene: cloning, identiliteation.
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Lee,E.Y., Bookstein,R., Young,L.J., Lin,C.J., Rosenfeld,M.G. and
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                               2842 CAGATGTGACTGTATAACTTTCCCAGGTTCTGTTTATGGCCACALLIAATA1CTTCAGCT 2901
                                                                                                          2467 CTTTPTGIGGATATAAAALGIGCAGAFGGAAFIGITTGGATGALFGTTAAGYTGAA 2526
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1. (bases 243-to-4740)
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Homo sapiens (clone: RB [1,5]) toetus retina cDNA to mENNA
Homo sapiens
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2167 CCTCCTAMACCACTGAAAAACTACGCTTTGATATTGAAGGATCAGATGAAGCAGATGGA 2226
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    (bases 1 to 2994)
    Antelman, D., Gregory, R.J. and Wills, K.N.

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100.0%; Pred. No. 0;
Live 0, Mismatches
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Patent: US 6074850-A 3 13-JUN-2000;
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	qu	2020	GCAGAGAGACAAGAAAAAAAAAAAAAAAAAAAAAAAAA	67
	ò	1507	TCACTGTTTATAAAAAAGGGTATACGGGTAGCCTATCTGGGCTAAATAAA	if.f.
	qri	2080	TEATAAAAAAGIGIAICGGCTAGGCGGCTAAATAAATACAGTITTIGAA 213	6,4
	ò	1567	CGCCTFCTGTCTGAGGGCCCGAGAATTAGAACATATCATCTGGGGCCTTTTTCGAGGAGATAG	17.
	Op	2140	CTGTCTGAGCAGCAGAATTAGAACAIALCALCIGGACC	661
	ς	1627	CIGCACATANDA ACTANDA ACTORIGA ANTIGO ACTA ANTIGO TO TOPE TO THE CONTROL OF THE CO	.# <i>6</i>
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	ς	1927	AGCCTTACAAGTTCCTAGTTCACCCTTACAATTCCTGGAAAAAAAA	986
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	qq	2560	761	،19
	δλ	2047	NGATONAGAATOTIAGIATOAATIGGGAAATOATIGGGGACTIFOTGAGAAGTIFOTGAGAAA 2106	901
	QQ	2620	267	943
	ςò	2107	ATAAATCAGATGGTAACAGCGACGGTGGCCAAAAGAAGTGCTGAAGAAGAAC 2166	991
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	οy	2167	CCCCCTAAAACACTAAAAAATAAACTTTCATATTGAAAGAFTACALGAAATAAGA 2226	477
	qq	2740	7	144
	Ś	2227	AGTAAACATCCCAAGACAGTCCAAATTTCAGTAGAAATTGGGGGGGG	286
	opo	2800	± ?⁴	45.9
-	ć	2287	CGAACACGAATGCAAAAGCAGAAAATGATGATGATGGATG	34.6.
	QQ	2860	GGAACAAGAATGCAAAAGCAGAAAATGAATGATAGCATGGATACCTGAAACAAGGAAGG	419
	λδ.	2347	-74	406
:	Ob	2920	AAATSAGGATCTCAGGACCTTGGTGGACACTGTGTGTCTGTGTGTCTGTGTCTCTCTC	674
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Antelman, D., Gredory, P.J. and Wills.K.N.
                                                                                                                                                    Retinoblastoma fusion proteins
Patent: US 6379927 A 3 30 APR 2002;
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                                                         847 GAGAAATIFGCTAAAGCTGTGGGACAGGCTIGTGGAAAITGGALCACAGGGALAFAAA 906
                                                                                                                                                                                                                                                                                                                                                                                                                                    1.460 ACMSTSAATCSAAAASAAAGTATACTGAAAAGAGTGAAGGATATAGGATACAFGTTTAAA
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Search completed: January 17, 2003, 18:07:35 Tob time - 5202 13 secs

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nucleic search, using frame_plus_p2n model M. protein

January 17, 2003, 18:15:29; Search time 3403.5 Seconds Run on:

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Scoring table:

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ALIGNMENTS

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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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Home sapiens retinoblastoma cDNA to mRNA.
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The retinoblastoma susceptibility gene encodes a nuclear
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Xu,H.-J., Hu,S.-X. and Henedict,W.E.
Broad-spectrum tumor suppressor genes, gene products and methods
for tumor suppressor gene therapy
Patent: US 5496731-A 1 05-MAR-1996;
                                                                       1313 GAGTATGATTOTTATTAGTATTCTATAGTGGGTCT FCATGCAGAGGGCTGAAAAAAA 1254
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                                                                                                                                                                                                                                                                                                                                                                                    gene products and methods
2-844 ACTEAAACA FOTOODAGGADACTTOODAGFTTOAGOAGAAAOTGGOAGAAATGGOOTOGOAGAAATTOAGAOTTO 2403
                                                  15.3 ACATGLIGAACTITATATATTIGACACCAGCAGTICGATATCTACTGAAATAAATTCT 2994
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                                  751 ArgThrArgMetGlnLysOlnLysMetAsnAspSerMetAspThrSerAshLysGluGlu 780
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Xu,H. J., Hu,S.-X. and Benedict,W.F.
Broad spectrum tumor suppressor geness
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                                                                                                                                                                                                       3232 hp. Sequence 2 from patent US 5496731.
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LESKLERTCELLYLTQPSSSISTETNSALVIKVSMITFLLAKGEVLQMEDDLYISFGL
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CIDLSPPM ILNVUNI KAEDPYKVI ESP UKAEGNU UPEMUKHI EKCEHKUMESLAMI SD
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E. Friend, S. H., Horwitz, T.M., Gerber, M.P., Wanq, X.F., Bogenmann, E.,
E., F.P. and Weinberg, R.A.

Deletions of a DNA sequence in retinoblastomas and mesenchymal
unors. organization of the sequence and its encoded protein
proc. angula Acad. Sci. U.S.A. 84 (24), 9059-9063 (1987)
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Location/Qualifiers
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                  2422 CCMPTGAAGAGTPPPATATAAAATTPPAGAAGGTCTGCCAACAACACAAAAAATGAGTPPA 2481
                                                                   68] ArgSerArgIleLeuValSerIleGlyGluSerPheClyThrSerCluLysPheGluLys 700
                                                                                                                                                                                                                                                                                                                  741 SerLysHisLeuProGlyGluSerLysPheGlnGlnLysLeuAlaGluMetThrserThr 760
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/protein_id="AAA69806.1"
/db_xref="G1:190946"
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Molecular mechanisms of oncourier matalions in 'umors from patients
With bilateral and unilateral refinoblastoma
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-7455 (1993)
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Darthal inectivation of the RE product in a family with incomplete penetrance of lamilial relinoblastoma and benion retinal tumors cacagos 9 (5), 1221-1926 (1994)
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Br. J. Cancer 68 (5), 958-964 (1993)
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Detection of hererozygous mutations in the RBI gene in
retinoblastoma patients using single-strand conformation
polymorphism analysis and polymerase chain rewition sequenting
oncodene 7 (7), 1445-1451 (1992)
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/hote-"Tumor GOS13 unilateral trameshift mutation resulting in premature stop; Associated with this mutation is a large 13q14.3 sub-band deletion; GO0-118-734"
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GOO:118-734"
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/noie="Tumor GOS159 unilateral mutation gausing a
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wrong splice; GOO-118-734"
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promature stop"
//cgblace-"ca"
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premainter stop.; GO0-118-734"
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/db_xref="G1:793995"
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/db_xret="taxon.9606"
E-mail: brenda@hatiz.eric.on.ca.
Location/Qualifiers
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/поце-"G00-118-734"
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/fires=lation="MPRTPPRTAATAAAAAEPPAPPPPPEEEDPEQDSGPEDLPL
/PI_PREFITEPPETAL/QKK_REPRIPEPAMLTWPFVSSVDxVU.0xyTQKKRELWGLO
/FIARVDLDEMSF_LLSYKKI?FLSVHKK_FD1S1KVDNAMSKLLKKYDVLPA
/LFSKLERTCELLYLLOFSSKISTELNSALVLKVSW_FF1.AKGEVLQMEDDLVTSFOL
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Homman retinoblastoma sosseptibility mRNA, complete eds.
M15400
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Lee W H , Rockstein, P., Hong, F., Young, L.J., Shew, J.Y. and Lee, E.Y.
Human retinoblastoms susceptibility gener cloning, identification,
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                                                                            25.75 AIAAAIGASAIGGINIGIAACAAGAAGGAGTGTTCAAAAGAAGTGGTGAAAGAAGAAGAAC
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Molecular mechanism of refinebiastoma gene inactivation in retinoblastoma cell line Y79
Proc. Natl. Acad. Sci. U.S.A. 85 (16), 6017-6021 (1988)
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Homo sapiers (clone: RB [1,5]) loetus retina cDNA to mRNA.
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Science 235 (4794), 1394-1399 (1987)
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/db_xre1-"taxon:9606"
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REYYRVMESMLKSEEERLSIQNFSKLINDNIFHMSLLAGALEVVMATYSRSTSQNLDS
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1038 bp upstream of EcoRI site; chromosome 13q14.1-q14.2. 1483 € 862 g HASE COON. ORIGIN

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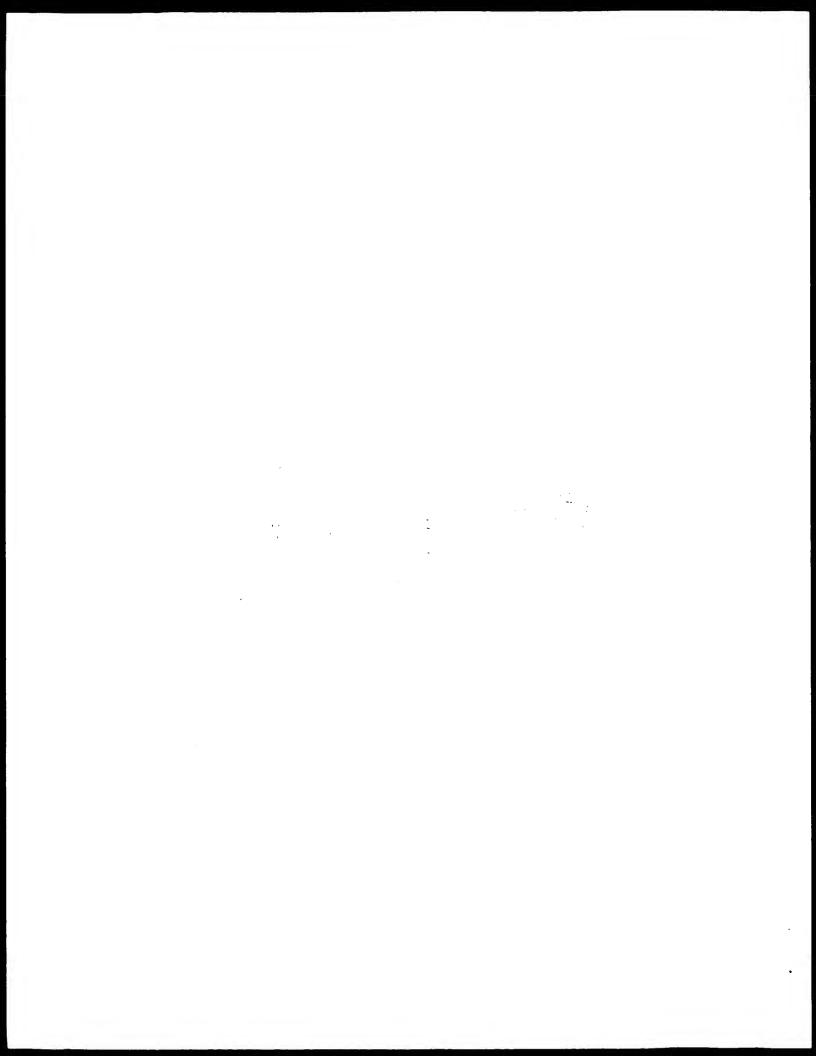
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ALLIGNMENTS

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M.8647, J02994 Homo sapiens (clone: p4.7k) cDNA to mKNA. Homo sapiens retinoblastoma protein. KEYWORDS

SOURCE

CRCANISM REFERENCE

AUTBORS

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Eukaryota; Motazoa; Chordata; Craniata; Vertebrata; Foteleostomu; Mammalia; Eutheria; Primates; Catarthin; Hominidae; Homo. i Chases I to 4600). Friend.S.H., Horowitz,J.M., Gerber,M.R., Wanq,X.F., Hogenmann,E., Li,F.P. and Weinborg,R.A. Deletions of a DNA sequence in rethoblastomas and mesenchymal

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Cancer gene determination and therapeutic screening using signature
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Eukaryota; Metazoa; Chordata; Craniata; Verfebrata; Eufeleosfomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
2889 GCCIGICIGACTACTITGCCTICITITGTAGCATATACGIGATGTITGCTCTTGTTTTA 2948
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Molecular mechanisms of oncoernic mutations in tumous from patients with bilateral and unitarieral retainchlustoma Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-735. (1993) 93348271
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Partial inactivation of the RE product in a family with incomplete penetrance of familial retinoblatoma and benign retinal tumors oncourse of 1, 1321-1326 (1994)
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                        3189 TAAAAGCTGGAAGCAAAAGTATAACCATATGATACTATACTGAAACAGATTICAL 3248
                                                                                     3249 ACCTCAGAATGTAAAAGAACTTACTGATTATTTTCTTGATCCAACTTARGTTTTAAATG 3308
                                                                                                         Hogg,A., Chadim, 2., Raird, P.N. and cowell, J.K., Detection of heterozygous mutations in the RB1 gene in retinoblastoma pathents using single strand conformation polymorphism analysis and polymerase chain reaction sequencing oncoment 7 (7), 1445-1451 (1992)
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Location/Qualifiers
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Bunnan retinoblastoma susceptibility mKNA, complete eds. M15400

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                                                                                                                                         1 (bases 243 to 4740)
Lee,W.H., Bookstein,R., Hong,F., Young,L.J., Shew,J.Y. and Lee,E.Y.
Human retinoblastoma susceptibility gene. cloning, identification,
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LETARVOLDEMSFELLSYRKTYBI SVHKEFNILIKETOTSTKVONAMSKLLKKYDVLFA
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RVLIKEFEYDSIIVEYNSVFMQRLKTNILQYASTRPPTLSPIPHIPRSPYKFPSSFR.R
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                                                                                                 Eukaryota, Metazea, Cherdata, Craniata, Vertebiata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Draft entry and computer-readable copy of sequence in [1] kindly provided by R.Heokstein, 27-APR-1987.
                                                                                                                                                                                                                                                                                                                                       Lee, E. Y., Bookstein, R., Young, L.J., Lin, C.J., Rosenfeld, M.G. and
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                                                                                                                                                                                                                                                                                                                                                                               Molecular mechanism of retinoblastoma gene inactivation in retinoblastoma cell line Y79
Proc. Mail Arid Sci. P. S.A. ME (16), 6017-6021 (1988)
                                                                                                                        Mammalia: Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                               Homo sapiens (clone, RB [1,5]) foetus retina conA to mRNA
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432 GIGGGGAAAICIGIATCIIIATIGCAČĢAGIISACCIAGAIGAGAAIGICGIICACTIIAC 490
                                                            129 IGAGCTACAGAAAAACATA-GAAAFCAGTGTCCATAAATICITTAACFIACTAAAAGAAA 187
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Οy	2200	PEGAAGAGICATATAAAAT TIGAGAAGICTOCGAACACGGAAGAAAATGACTGAAGA 2259
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γo	2260	TCANGANICITAGIAICAATISGIGAATCATICGGGACTTCTGAGAAGTTCCAGAAAATA 2319
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for tumor suppressor qene therapy
Patent: US 5496731 A 1 05:MAR-1996;
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항 <u>원</u>	2480	CCTAAAPPACTGAAAAAACTACGTTTGATATTGAAGATCAGATGAAGACAACAAGA 	2439 2346,
항 를	2440	AAACATOTOCAGGAGACOCAAAATITGAGAGAAAQTGGGGAGAAALGACTGTACTGCA 	2499 2406
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Falent: US 5496/31-A 2 05-MAR-1996;
                                        2920 CATATAGGTGAIGTTGCTCTTGTTTTATTATATGTATATTTTTTTAAATTTAAAC 2979
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                                       1600 CCIGIAAGAICICCAAAGAAAAAGGIICAACIACGCIGIGAAIICIAAIICIAAAIGCA 1459
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                 350 ATGAACAM CITAMAAATGIGTOOTAFOIATGAAATGCAAATTIGAITGACTGGGC 291
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                                                2169 GATTCCTGGAGGAACATCTATATTTCACCCTGAAGAGTCCATATAAAATTTCAGAAGG 2228
                                                                2289 ATTCGGGACTTCTGAGAAGTTCCAGAAATAAATAAGATATGGTATGTAAGAAGGGCGCGT 2448
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               2772. TAFESTANGSARY WGARSAASOGASATOGAAGTAAACATOTOCOGAGAGAGTSOAAATTTOA 2831
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                                                                    2469 GCAGAAACHGGCAGAAALGACHCHAGICGAACACGAATGCAAAAGCAGAAAHGAATGA 2528
                                                                                                      2529 TMFCATGGATACCTCAAACAAGGAAGGAAATGAGGATCTCAGGACCTTGGTGGACACTG 2588
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                  489 ATATAAAACAGGGGTTATAGGGGTTGAGGTTGAAGAGAGGGGGAGAGGGGGAAA
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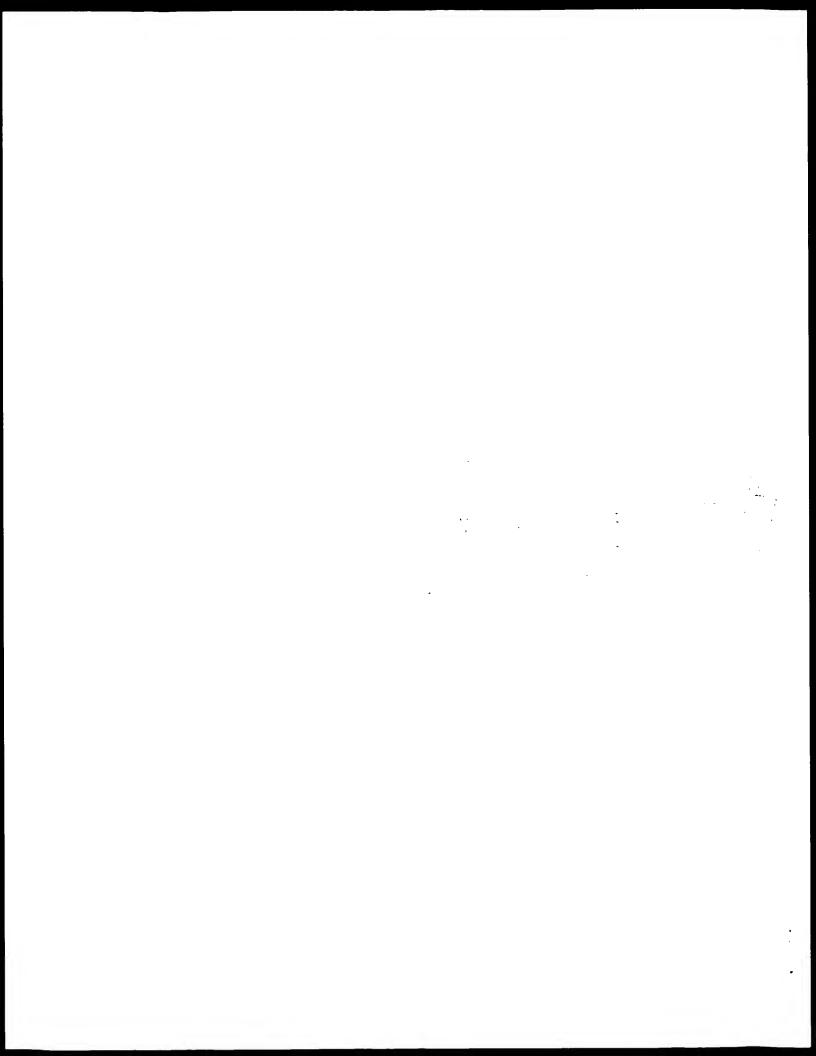
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1689 CCAGAAAGCCATTGAAATCTACCTCTCTTTCACTGTTTTATAAAAAAGTGTATCGGCTAGC 1748
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                  Look up DNA linear P
Tissue specific expression of retinoblastoma protein.
BD009728
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Artchman,D., Gregory,R.J. and Wills.K.N.
Tissue specific expression of retroxListoma protein
Patent: JP 20015@289-A 2 21-MAR-2301;
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Retinoblastoma gene-cancer suppressor and regulator
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Arbiman D. Grydryk I and Wills K N
Tissue specific expression of retinoblastoma protein
Patent: JP 2001563538 A 2 21:MAR-2901;
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15-NOV-1996 HE ARTS151
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JP 2001503638-A/2.
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                            42 LysGluLevIIrpGlyIleCyslleFheileAlaAlaValAspLeuAspSluMetSerPhe 61
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Characterization of a novel anti-pll0.sup.RH monoclonal antibody
Patent, US 5215555 A z 20-JAN-1998;
Location/Qualitiers
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                                      2464 COCOCTACOTIGICACAATACTICACATICGICGAACCIGITACTATAAAGII COLAGIICA 2523
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1504 GTAATGGAATGCTTAAATCAGAAGAAGAACGA.TATCCATTCAAAATTTTAGGAAA 156
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The relinoblastoma susceptibility gene encodes a nuclear phosphororein associated with DNA binding activity MAINTER 29 (6140), 642-645 (1987)
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Dryja,T.P. and Friend,S.
Human DNA in the diagnosis of retinoblastoma
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\$ 7	7.7	LouThrIrpd LlysVilsorSorValAspdlyValLesGlySlyTyrIleGlpLysLys 41
ŝ	477	TIAN'TISSIANAAAGIIICAICIGIGGAGAGAATHGGGAGTIATATTCAAAAGAAA 285
7.0	4.2	EyschinkoulipülyilooysilepholleAlaAlaValAspicuAspiluMetSerPhe 61
ŝ	286	ANGGAAPTGTGGGGAAATCTGTATGTTATGCAGCAGTGACCTAGATGAGGTGGCGTTC 445
) % **	4,2	ThrenethrelanachlaysAsulleclufleSerValifisLysPhePheAsnLeuLeu 81
9.5	146	THE CONTROLLER OF THE CONTROLL
7.7	78	LyschalleAspThrSerThrLysValAspAsnAlaMetSerArqLeuLeuLysLysTyr 101
i.	406,	AANGAATTGTTGTTGTTGTTGTTGTTGTTGTGTGTGTTGTTGT
2.0	107	AspValleupheAlaLeupheSerTySTeuGTuArgThrCysGluLeuTleTyTLeuThr 121
â	466	GATGTATGTTTGCTTTGAGGAAATTGGAAAGGCAGTGTGTTATATTTGACA 525
20	122	dinProserserSerTheSerThrdlufleAsnserAlaLeuValLeuLysValSerTrp 141
<u>a</u>	474	PARTICALITATION OF THE PROPERTY OF THE PROPERT
5	142	TheThrPheLeuLeuAlaLysGlyGluValLeuGlnMetGluAspAspLeuValIleSer 161
ą.	386	AFGAGATTTTAFTAGTAAAGGSSAAGTATTAGAATGGAAGATGATGTTTGA 645
ž,	16.2	PheblinenMethenCysVallenAsplyrPhelleLysLeuSerProProMetLeuLeu
11.	6.46	FIRMATIANTOSTAIGESTEGETEGACIATITIANTAAACTECTAACTOSCATGTIGGTE 705
	182	LyscluproTyrLysThrAlaVallloProLleAsnOlySerProArdThrProArgArg 201
=	706	AAAGAACCETATAAAAAAGCETATAAAGCETCAACGCCCGGAAGAGCGAGGGAAAAAAAAAA
5	707	GlychnAsnArgsorAbaArgTloAlafyschnFoodbaAsnAspThrArgTletHath 221
Ē	16.6	GOTTAGAARAAGAGGGGGGGAAAAGAAAAAAAAAAAAAAA
6.5	777	Vallene'ystysolontsoloc'ysasniloaspoloValtysasnValtyrPhetysasn 241
÷	8.26	GIPTEGHAMAGAACAIGAATGIAATAIAGAIGAAGAAAAAAATGITAITATTGAAAAAT 885
A.	242	PhelleProPacMetAsuserLeadlyLeuValThrSerAsu617LeaFroSlaVal61u 261
===	886	TITITITITITITITITITITITITITITITITITITI
70	797	AppleuSerlysArgTyrCluCluleTyrLeuLysAsnLysAspLeuAspAlaArgLeu 281
â	946	AATCTTCTAAAGAATAGAAGAATITAGGIIAAAAAIAAAGAGGAAGATTA 1005
	787	PhotouAspHisAsptysThrtouGlnthrAspSerlleAspSerPheGluThrGlnArg 301
1	1006	TTTTTGGATCATGATAAAACTCTTCAGACTGATTGATAGACAGTTTTGAAACAACAGAACA 1065
5	40.2	Thr FroArdLysSerAsnLeuAspSluGlaValAsnVallleProProHisThrProVal 321
3.2	1066	APAPPAGSAAAAGTAAPCTTGATGAAGAGTGAATGTAATTGGTGGAGAGTGCAGGTT 1125
67	122	ArqThrValMet AsuThrIlecludInLeuMet Met IleLeuAsuSer AlaSerAspGln 341
÷.	1126,	ARBACTOTTATGAACACTATTAATGATGATGATGATTAAATTGARGGATGATTABS
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                                                                                               ValMetGluSerMetLeuLysSerGluGluGluArqLeuSerlleGluAsnPheSerLys 421
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Friend, S.H., Horowitz, J.M., Gerber, M.R., Wanq, X.F., Bogenmann, E., Li, F.P. and Weinberg, R.A.
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Cancer gene determination and therapeutic screening using signature
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo
                                          222 + ASASA YAGGATI FOGALOAAA ITA FOTIGTOTI COATGIA FOGOATA FOGAAAGI GAAG - 2282
                                                                                                                                                                                               446.4 CCCCTACCTTGTCACAATACGTCACAATGCTCGAAACCCTTACAAATTGCTAGTGA 2522
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with bilateral and unilateral refinchiastoms
Proc. Natl. Acad. Sci. U.S.A. 90 (15), 7351-7355 (1993)
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Br. J. Cancer 68 (5), 958–964 (1994)
                                                                          Oncogenic point mutations in exon 20 of the FBH gene in families showing incomplete penetrance and mild expression of the
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/protein_id="AABS9465.1"
/db_xret="GL:794995"
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Proc. Natl. Acad. Sci. U.S.A. By (14), 6177-6181 (1992)
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/note-"Tumor GOS13 unilateral frameshift mutation
resulting in premature stop; Associated with this mutation
is a large 19414.3 sub-band deletion; GOO-118-734"
/citation-[5]
/replace-"ca"
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5.0.2 ArglieMetGluSerLeuAlaTrpLeuSerAspSerProLeuPheAspLeuIleLy
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2 Leushullstlellerpfhris 11411
2 ArgaspargHisLeuaspGln11c

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HUMMES 4740 bp mRNA linear PRI 12-JUL-1995
Human retinoblastoma susceptibility mRNA, complete cds.
M15400
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Human retinoblastomm susceptibility gene: cloning, identification.
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2404 TATAACTCCCTCCTCATGCAGAGTGAAAACAAAINITTTGCAGTATGCTTCCACCAGG 2463
                                                                                                                      2524 CCCTTACGGATTCCTGGAGGGAACATCTATATTTCACCCTGAAGACFCCATATAAAATT 2583
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                                                                                                                                                                                                                                                                                                722 ProProThrLeuSerProIleProHisIleFroArgSerFroTyrLysPueProSerSer
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                                                                                            682 GlnGluThrPheLysArqValLeulleLysGluGluGluGluTyrAspserllelleValFhe
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1 (bases 243 to 4740)
Lee, W.H., Bookstein, R., Hong, F., Younq, L.J., Shew, J.Y. and
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/Ab_wrot "taven;4606"
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FARE COUNT 1508 a 887 c 862 q 1483 t OFLIGHA 1038 bp upstream of Ecoki site; chromosome 14q14.1-q14.2.

US 09 026 459A 31 (1 B74) x HUMRBS (1 4740)

	7	Aspthethralabau@ysdlnLysLeuLysTleProAspHisValAraGluArgAlarrp 21	
- F	404	GATITITALIGITATIAN GANAAATTAAAGATAAGAGAGATCATGTTTTTTTTTTTTT	
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35	46.4	864 TTARCHIGGGAGAAAAGTITCALCIGIGGAGGAGAGAGAGAGAGAGAAGAAAAAAAAAAA	
5	4.2	42 LysdiuLenTrpGlyTLeCysTLePheTLeAlaAlaValAspLeuAspGluMetSerPhe 61	
÷	474	AAGGAGGAGGAGATCTGTATTTTTTGGAGGAGTGGAGGTGTGGTTGTTTTTTTT	
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5	3.1	81 otyschulteAspThrSetThrLysValAspAsuAlaMetSetArdLeuLysLysTy 101	
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1323 ACCTTCAGAAAATCTGATTTCCTATTTTAACAACTGCACAGTGAATCCAAAAGAAAAGTAT 1482
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                161 rPheGInLeuMetLeuGysValLeuAsplyrPhellelysLeuSerProProMetLeuLe 181
                                                                                                                                      201 gGlyGlnAsBArgSerAlaArg11eAlaEysGlnE-GGluAshAryCTLArgTD-12-Gl-221
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121 rGhnProSerSerSerIleSerThrGhulleAsnSerAlaLeuValLeuLysValSerTr 141
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                                                                                                                                                                                                                                                                                 Fung, Y.K.T., T'Ang, A., Murphree, L.A. and Benedict, W.F. Amethod for detecting the predisposition to relinoblastoma and a method for detecting a relinoblastoma gene in tumors using a retinoblastoma gene probe
                                                                                                                                                                                                                                       Eukaryota, Metaloa, Chordata, Cranlata, Vertebrata, Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 4580)
192 AspValleiPheAlaLeuPheSerLysLeuGlaArqThrCysGluLeuTleTyrLeuThr 121
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H Sapiens DNA 10r 4.6 kb rétinchlasisma gene probe.
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                                          861 sMetAsnAspSerMetAspThrSerAsnLysGluGluLys 874
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Conservative:
Mismatches:
Indels:
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RESEARCH DEVELOPMENT FOUNDAIION
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/db_xret-"taxon:9606"
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DNA P. F.	ative: hes:	GlnLysAs CAGAAAAA	SerThrLy 	LeuPhese [[[]]]]] crc:rrcAG		Alalysci 	Cysvall.c GrGrCCT	Thralava ACAGCTGT	Alaargii 	Hisclocy 	Asnserte HIIIIII AATTCTCT	Tyrcluci TACGAAGA
230 hF S912236. nedict,W. Tapy JUN 1999 OTS Wn"	Longth: Marchos: Conservat Mismatche Indels: Gaps: (1-3232)	ThrGluLeu 	HERSPThr HILLIIII AFFGATACC	CeuPheAla HIIIIIII FTCFTFGCA	SerSerSer AGCAGTICG	Pheleuteu 	Leumetheu HIIIIII TAAIGCTA	ProTyriys 	AshArgSer NACAGGGT	Tystyschu HIIIIIIII IGTAAAGAA	ProPheMet. 	Serlysarg HIHIHH FCIAAACGA
AR072041 Sequence 1 from patent US 5912346 (AR072031.1 01:722919 Unknown. SM Unknown. (Loses 1 to 3232) (ANH. J. Hu.SX. and Henedict, W Bread-Spectrum tumor suppressor get tumor suppressor gene therapy (Lumor suppressor gene therapy) (Lumor suppressor gene therapy	7.35c-305 4213.00 100.00% 100.00% 93.54% 6.354% 4) x AR072031 (4)	AsptenAspGluMetSerPheThrPheThrGluteuGlntysAsnIleGlu1leSerV, 1	HISTYSTHEPHEASTLEULEULAGIUJSELULIEASPTHTSETTHTIJSVALASFASIALAMET 	Serargiculeulysiystyraspvalleuthealaleutheseriysleudluargthr 	CysoluteutheTyrLeuthrGluProSerSertleSerThrGlutheAsnSerAla 	LOBVATTETTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	G naspaspieuval Heserbegi ni euweti eusysva Lenaspiyrithe Heisys ELLI HELLI	Leuser Proprowet LeuLeuLyodlaprotyr Lysthalaval HerrotLeardly 	SOTPLOATGEBRIEGARGEGENOTASBATGSCFALAARGEGENGEGENET THEFTER THE	ASBASPTERAGITETTEGLUVATLEUGYSTYSCIDHTSCTSCYSASBITEASPCTUVAT EFFELLETTETTETTETTETTETTETTETTETTETTETTETTE	Lysacuvaltyrdbolysasodbolledrodbome.Asoserloughyleuvalthriser 1711-1711 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1 Aaaaligiitaitticaaaaaittiyalacuttytaigaattictictiggactigisaacatot	ASBORY COPPOSITO FIGURAS OF COSCILYSAS TYRES OF DEBUTE OF YELCOLYSAS DEFINED FILLE F
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GACTA FITTIAFFTAAACTETICCOATIGTTIGCTCAAAGAACCATATAA	roArgArgGlyGln/ 	::]cCluVa!! 	ysasnihell 	sluvalgluAseLeu: 	aArgteuPheteuAx 	itGliiArgThrPro 	ThrProValArgThrV 	laseraspelmProser 	uSerlleLeutysArg 	LysgluLyspheAlaLysAlaValQlyGlnGlycysValGl 	rTyrargValMetG) 	eSertysteuteuA 	lMetAlaTh 	OTTP1 	H CLY H H H H ATCAA	qIle AATC	elysGluSerlysAspArgGlu 	10.1hrAspäistaudtu.SerAlaCysptoleoAshtoapPtoleuGhashAt
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Mismatches:
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Antelman, D., Gregory, K.J. and Wills, K.N.
Retinolastoma fusion proteins
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Matches:
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                           322 ThrileGinGinLeuMetMetIleLeuAsnSetAlaSerAspGinPreSerGluAsnieu
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Tissue specific expression of retinoblastoma protein
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ے	r r	APARCIGITATARCEATTAATGGTTEAACATECAACAGGGAGGTCAGAACAGGAGT	30 50
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Lee,W.H., Shew,J.Y., Hong,E.D., Sery,T.W., Donoso,L.A., Young,L.J.,
Bookstein,R. and Lee,E.Y.
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                          842 LeualadluMetThrSetThrArqThrArqMetGlntysGlnLysMetAsnAspSetMet B51
                                                                                                                                                                                                                                                                            Human retinoblastoma susceptibility protein mana, complete eds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /map-"xp22.82;yp11.8"
/cell_line="retinoblastoma cell line Y79, and normal
retinoblastoma cell line"
| ...ssue_type="retinoblastoma"
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                                                                                                                                                                                                                                                                                                                                                retinoblastoma protein: retinoblastoma susceptibility protein.
Homo sapiens retinoblastoma cbNA to mkNA.
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/organism-"Homo sapiens"
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US-09-026 454A-47 (1-854) x HUMFBSA (1-2994)

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م ج	161	The Cystle Phethe Ala Ala Val Aspleu Aspiral wet Ser Phethr Phethr Gluber Filter	2 6
<u> 24</u> .0	1.21	OldiysashileOldileSetValHisLysPbePbeAsnLedLedLysGluileAspthr 1 	
ь <u>а</u>	14 14 14	Set ihri ysvalaspasnalaMet Serargi.eui.eui.ysiysTyraspvali.eupheala 1 	
ھ ج	161	LeuPheSerLysLeuGluArqThrCysGluLeuIleTyrLeuThrGlnProSerSer 1 [1]	
; -	181	Moto:	
: ع	25.7	ATATCTACTGAAATAAATTCTGGTTGGTGGTAAAAGTTCTTGGATCACATTTTTAFTA	
چ. ۰	3.46	GCTAAAGGGAAGTAFTAGAAATGGAAGAFGATGTGGTGATFFCATFFC	
>-	181		
بد	2	TGTGTPCPTGACTATETFANTAAACTCTCACCTCCCAFGTTGCTCAAAGAACCATAFAAA E	
3- A	18.2 8.19	Valalavali (eprolleasestyserpreazgybrproatgstys) brandraser Defection of the Comment of the Co	
1% A	202 414	ALAAR OLJOATALIYSS TULSSOON ASSENTATTELLOSTSVATTENGSTISSSTA C ELLELLITTE	
۾ ح	27.2	ysAsolleAspoluValLysAsoValTyrPheLysAsoPholleProPheMel	
ش جا	242 1 - 59	AshSert.euGlyt.euValThrSerAshGlyt.euProGluValGluAshLeuSert.ysArg 2 	
24 A	262	PTC10001CPTTLC01gsAshlySAsplcuAspalaArglcubbelcuAspHisAsp 2 	
ہے ہ	282	PUGINTHEASPSETTIEASPSETPHEGIUTHEGINARGTHEPOARGLYSSET 	301 1218

oy	302	Ashleuaspolugluvalasnyalileproprofisibipiovalargrhrvalmetasn	321
Db			1278
9.0	322	ThrileGinGinLeuMetMetIleLeuAsnSerAlaSerAspGinFroSerGinAsnLeu	341
0.0			1338
99	342	THESETTYPHEASDASDCYSThrValAsDProLysGluserIloLeuLysArqValLys	361
92	1339		1398
Qy	362	ASP116G1yTyr11cPh6LySG1uLyStPtcAlaLySAlaVa161yG1zG1yCysVa1G1u	381
	1399		1458
Qy.	382 1459	TeGLySerGlnArgTyrLySLeuGlyValArgLeuTyrTyrArgValMetGluSerMet.	401 1518
ó d	402	LeulysserGludludludraleuseriledinasnFheSerlysleuleuasnAspasn 	421 1578
රි සි	422	HEITHER SOFTON COARACTS AND THE HEITHER THE ATTITION OF A THE THE HEITHER THE ATTITION ATTITI	441
oy	442	SerThrSerGlnAsnLeuAspSerGlyThrAspLeuSerPheProTrpIleLeuAsnVal	461
ac			1598
Oy	462	LeuAsnicoulysAlaPheAspPheTyrLysVallleclusSerPhelleLysAlacludly	481
Op	1699		1758
O _Y	482	ASTLOUTHTATEGLUMOT LIGESSHISLOUGLUATGCYSGLUHISATGLIOMOTOLUSET	501 1818
9.y 13.b	502	LcuAlaTrpLeuSerAspSorProLeuPheAspLeuIleLysGlnSerLysAspArdGlu 	521
O.y.	522	GLyProthrAspHisLeaGlaSerAlaCySProLeaGsnLeuProLeuGlaAchAshHis 	541 1538
oy	542	ThralaalaaspwetTyrLcuScrProvalargScrProtysLysLysClyScrThrThr	561
Dp	1939		1498
	562	ArqValassserthralaassalaglithidilliiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	581
Ob	1999		2058
ço	582	ProfoullysserThESorLowSerLowPheTyrLystysValTyrArateualatyrLeur	661
da	2059		2118
Oy	602	602 ArgicuAssibhleaCysCluArgiculeaSerGisHishroClubesGluHishleife (51	6.21
Db	2119		2178
. ,	622	TrpThrLeupheGluHisThrLeuGlnAsnGluTyrGluLeuMetAraAspArdHisLeu	641
du	2179		2238
ćο dα	542	ASFGINITEMENTESSERMETTYFGLYTLEGYSLYSVALLYSASDITEASFLEULYS 	661 2298
·. oy	799	Pholysile:levalThrajaTyrtysAsplouProsisAlaValGinGluthrPhetys	681